



MORINI CM 162EI

TECHNICAL DATA

- Calibre: 4.5 mm (.177)
- Weight: 1060 g
- Weight Titan: 1060 g
- Weight Short: 970 g
- Length: 410 mm
- Length Short: 370 mm
- Height: 140 mm
- Width: 50 mm
- Length of Sight Line: From 310 mm to 350 mm
- Barrel Length: 240 mm
- Barrel Length Short: 200 mm
- Type of Barrel: Lothar Walther 6 dx 450 mm
- Type of Barrel Short: Lothar Walther 12 dx 450 mm
- Number of Riflings: 6 Polygon
- Number of Riflings short: 12
- 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: 2 x 1.5 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: 200
- Number of Shot with 200 bar Short: 150
- Grips: Adjustable/Fixed - Right/Left

ATTENTION

Before using your Morini CM 162EI Compressed Air Pistol, please be sure to get absolutely well acquainted with the handling and function of the gun, guided by these instructions. Even quite a safe gun may become dangerous to you and other persons by faulty handling. Generally, hold the gun in a way that you do not expose anyone to danger. Even an unloaded 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 discharged from any warranty. From time to time it is recommended to have the gun tested by an authorised gunsmith for safety and function.

4 Dear shooting friend,

You are now in possession of a Compressed Air Pistol model **MORINI CM 162EI**, 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 detail in the manufacturing of all Morini products assure satisfaction in functioning and almost unlimited durability of the pistol, 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 pressure. The pistol is the result of the desire to produce a high quality match air pistol combining the advantages of the precompressed air system 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 CO₂ gas system. Some of the world 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 162EI

This model is conceived for firing single shot of 4.5/.177 calibre. The propelling element is Air, which is found in the detachable cylinder under the barrel. Do not use CO₂ in your pistol, as it has not been conceived for this purpose, the use of CO₂ 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 these 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 directed and indirect damages.

WARRANTY

The compressed air pistol **MORINI CM 162EI** has a guarantee of 2 years (not related to sealing, for digital Manometer we guarantee 1 year as per supplier). Within this period our obligation is to exchange, free of charge, all those parts that are deficient, due to factory defects. This guarantee loses its validity if the weapon has been improperly treated, inexpert repaired, corroded, bad maintained or altered in any way.

FIG.1

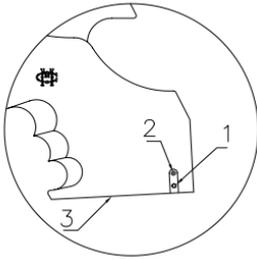
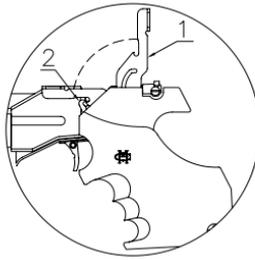


FIG.2



1. TURNING ON THE ELECTRONIC (FIG.1)

1.1 Switching on the electronic

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 batteries are empty. If the LED is more on than off, the batteries are good, if it is more off than on it is better to change batteries.

The LED force depends on the batteries voltage. If they are empty it may be more difficult to see the flashing LED. Unless more than 2 seconds are needed to generate the 20V it is still possible to shoot. We strongly recommend, however, changing the batteries when the LED off period is longer than 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 for 15'000 shots approx.

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 20 V in 2 seconds:* The electronic is damaged or there is a short circuit on the output contacts.

1.2 *Introduction of the batteries:* Remove the cover plate (3) situated at the base of the grip. Extract the electronic from the grip and introduce 2 batteries 1.5V Micro Type AAA paying attention to the polarity. Reinsert the electronic and put the cover plate in position again. This operation and eventually the displacement of the electronic must be done with unloaded pistol and electronic turned off.

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.

2. LOADING THE PISTOL (FIG. 2)

Pull lever up and introduce the pellet in the chamber and close by pushing the lever in place.

ATTENTION: If you cannot lift the cocking lever, it means that your pistol does not contain air or that the pressure of the air contained in the cylinder does not permit you an adequate velocity and therefore the shots would result lower. In either case, fill or replace the cylinder and make sure that Hock lever does not block the cocking lever.

FIG.3

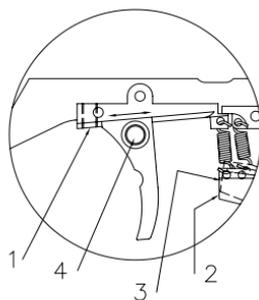


FIG.4

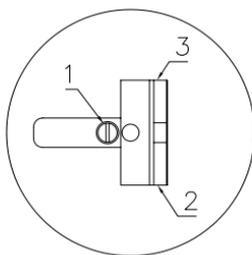
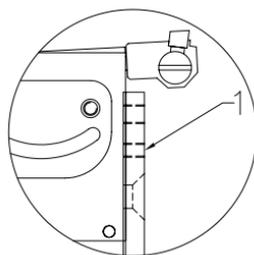


FIG.5



3. TRIGGER ADJUSTMENT (FIG. 3)

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:

3.1 Adjustment of trigger take-up

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

3.2 Adjustment of first stage travel

Turning adjustment screw (2) clockwise increases the load. The range is 300 - 700 g.

3.3 Adjustment of second stage travel

Turning adjustment screw (3) clockwise increases the load. The range is 50 - 300 g.

3.4 Adjustment of trigger position

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

4. SIGHTING ADJUSTMENT (FIG. 4)

4.1 Vertical adjustment

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

4.2 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.

4.3 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.

5. SIGHT

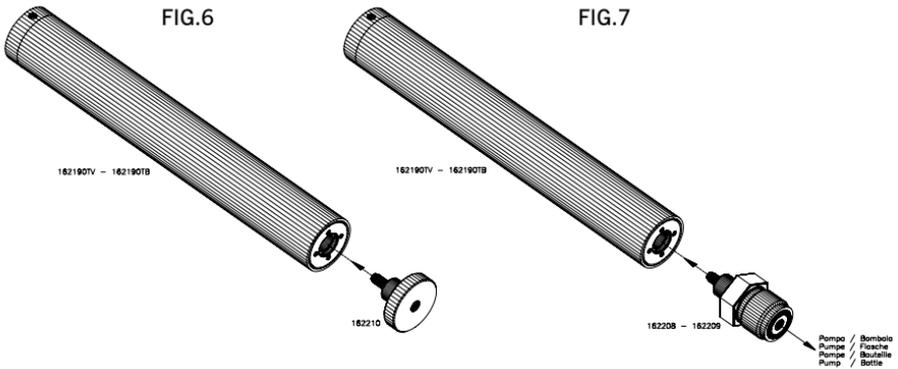
The pistol is supplied with a 5.0 mm wide front sight post, as standard. Other front sights with different widths (4.0 - 4.5 - 5.5 and 6.0 mm) are supplied as accessories.

6. PELLET VELOCITY (FIG. 5)

Pellet velocity V_0 is set in the factory at 150 m/s (492 ft/s). It is suggested that this adjustment should not be changed if you do not have the necessary equipment.

7. COMPRESSED AIR CYLINDER

It is required to observe the legal dispositions and rules of the respective 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 thanks the manometer that is built in all cylinders. The air pressure cannot 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.

8. FILLING THE CYLINDER (FIG. 7)

Besides of the following details, any technical regulations of your country must be observed. Three common methods are used to fill the cylinders:

- connecting the cylinder to the adapter, supplied standard, attached to a scuba diving bottle and open the valve of the scuba diving cylinder for a few seconds. Close valve and unscrew cylinder from the adapter;
- connecting the cylinder to the adapter, supplied standard, attached to a compressor or hand pump.

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.

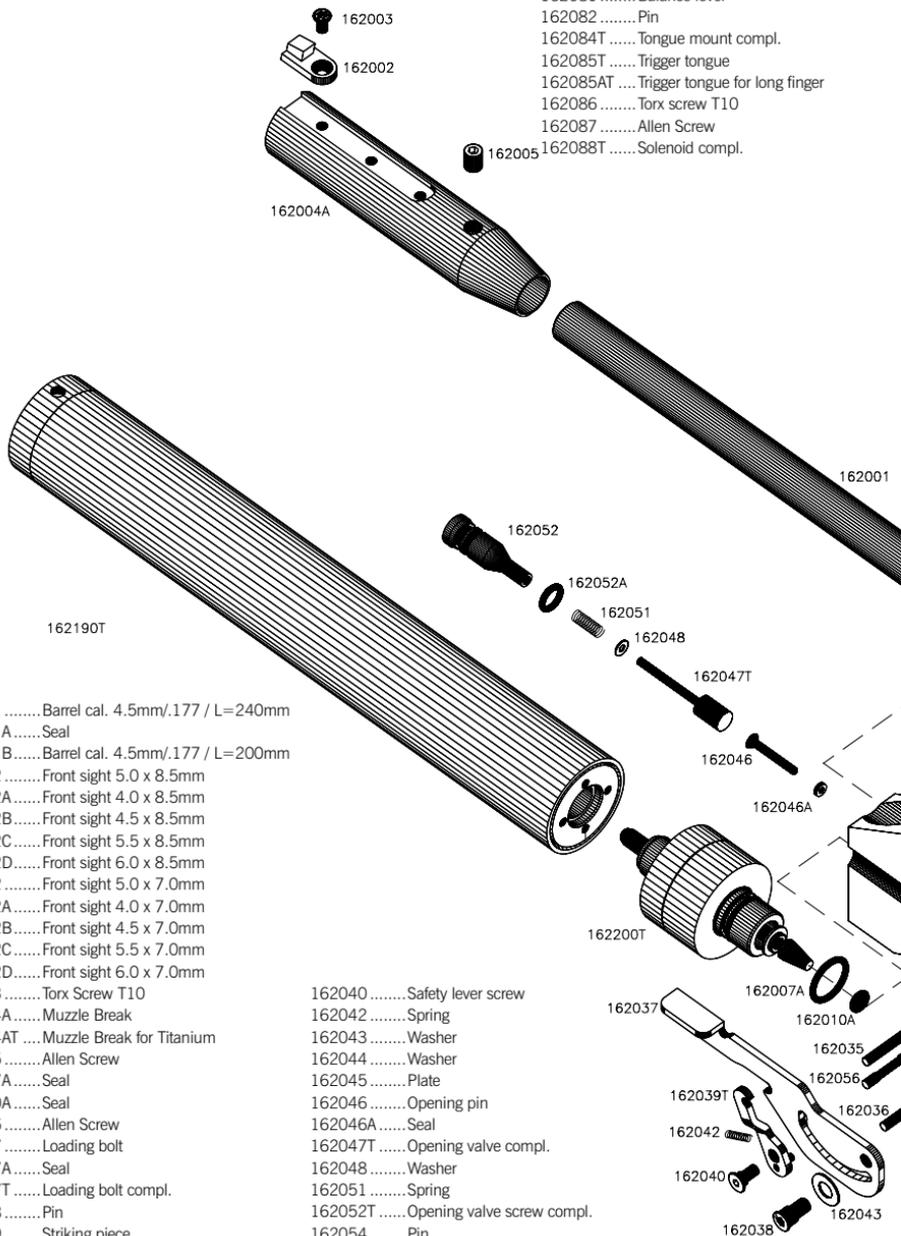
9. EMPTY OUT A CYLINDER (FIG. 6)

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.

10. MAINTENANCE: IMPORTANT

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.

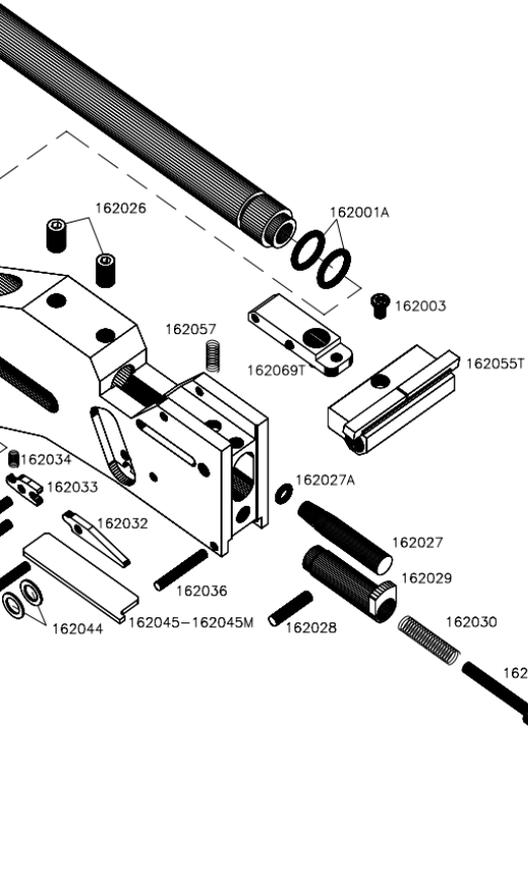
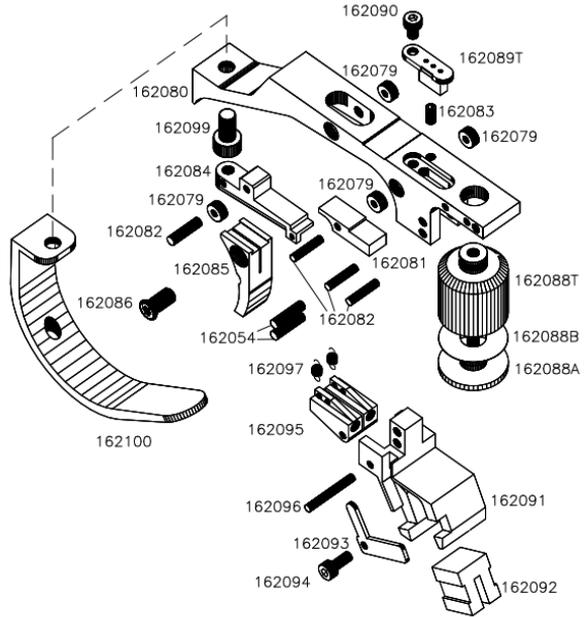
- 162081 Balance lever
 162082 Pin
 162084T Tongue mount compl.
 162085T Trigger tongue
 162085AT Trigger tongue for long finger
 162086 Torx screw T10
 162087 Allen Screw
 162088T Solenoid compl.



- 162001 Barrel cal. 4.5mm/.177 / L=240mm
 162001A Seal
 162001B Barrel cal. 4.5mm/.177 / L=200mm
 162002 Front sight 5.0 x 8.5mm
 162002A Front sight 4.0 x 8.5mm
 162002B Front sight 4.5 x 8.5mm
 162002C Front sight 5.5 x 8.5mm
 162002D Front sight 6.0 x 8.5mm
 162002 Front sight 5.0 x 7.0mm
 162002A Front sight 4.0 x 7.0mm
 162002B Front sight 4.5 x 7.0mm
 162002C Front sight 5.5 x 7.0mm
 162002D Front sight 6.0 x 7.0mm
 162003 Torx Screw T10
 162004A Muzzle Break
 162004AT Muzzle Break for Titanium
 162005 Allen Screw
 162007A Seal
 162010A Seal
 162026 Allen Screw
 162027 Loading bolt
 162027A Seal
 162027T Loading bolt compl.
 162028 Pin
 162029 Striking piece
 162030 Main spring
 162031 Spring guide
 162032 Lever
 162033 Sear
 162034 Spring
 162035 Pin
 162036 Pin
 162037 Cocking lever
 162038 Screw
 162039T Safety lever compl.

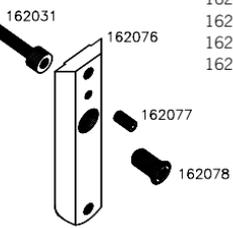
- 162040 Safety lever screw
 162042 Spring
 162043 Washer
 162044 Washer
 162045 Plate
 162046 Opening pin
 162046A Seal
 162047T Opening valve compl.
 162048 Washer
 162051 Spring
 162052T Opening valve screw compl.
 162054 Pin
 162055T Rear sight compl.
 162056 Pin
 162057 Spring
 162069T Rear sight mount compl.
 162076T Closing plate compl.
 162077 Allen Screw
 162078 Torx Screw T20
 162079 Ball Bearing
 162080T Trigger unit black
 162080TIT Titanium Trigger Unit compl.

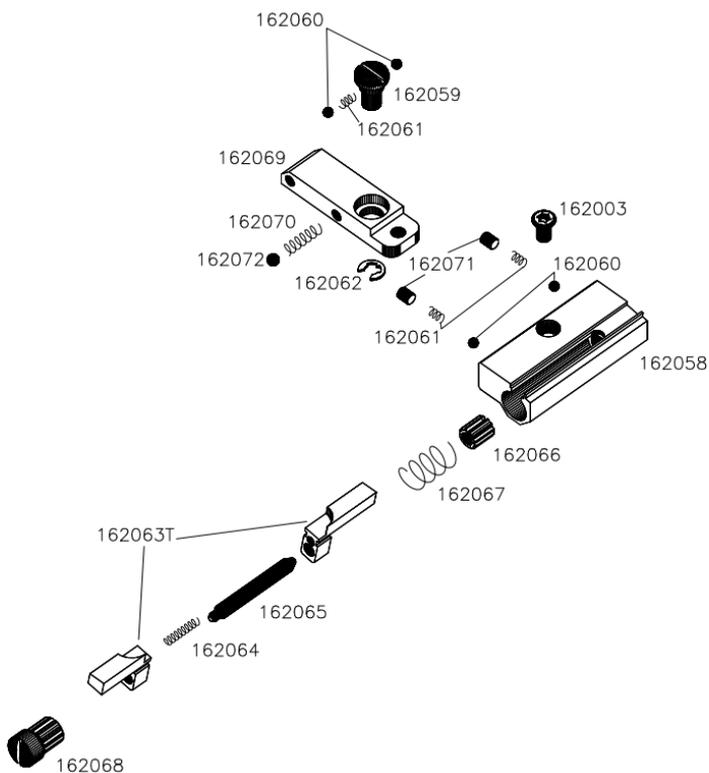
- 162089TMicroswitch compl.
- 162090Allen Screw
- 162091Electronic connection holder
- 162092Electronic connection 1.5V
- 162093Electronic connection plate
- 162094Allen Screw
- 162095T Trigger weight regulator compl.
- 162096 Pin
- 162097 Trigger spring
- 162099Allen Screw
- 162100 Trigger Guard



- 162106Electronic cover Right
- 162106AElectronic cover Left
- 162190TBAir cylinder blue with analogic manometer
- 162190TBDAir cylinder blue with digital manometer
- 162190TCBAir cylinder short blue with analogic manometer
- 162190TCBDAir cylinder short blue with digital manometer
- 162190TRAir cylinder red with analogic manometer
- 162190TRDAir cylinder red with digital manometer
- 162190TCRAir cylinder short red with analogic manometer
- 162190TCRDAir cylinder short red with digital manometer
- 162190TTAir cylinder Titanium with analogic manometer
- 162190TTDAir cylinder Titanium with digital manometer
- 162190TCTDAir cylinder short Titanium with digital manometer

- 162200TPressure reduction compl.
- 162208Air adapter 200 bar
- 162210Air release adapter
- 162311TBarrel weight 60gr
- 162313TWeight 15g / M3 compl.
- 162401Electronic Right, 1.5V
- 162402Electronic Left, 1.5V
- 162403Battery 1.5
- 162410TCylinder weight 60gr.
- 162411TCylinder weight 80gr.
- 162450TBarrel weight set 4x15gr
- 162500Rear sight extension





- 162058 Rear Sight
- 162059 Screw
- 162060 Ball 2mm
- 162061 Spring
- 162062 Washer
- 162063T Sight blades complete
- 162064 Spring
- 162065 Rear Sight holder
- 162066 Regulation Screw
- 162067 Spring
- 162068 Screw
- 162069T Rear sight mount compl.
- 162070 Spring
- 162071 Allen Screw
- 162072 Ball 2.5mm