



**M2 PCP AIR RIFLE**  
USER MANUAL

# CONTENTS

Safety code .....	3
M2 rifle overview .....	4
M2 ultra-compact rifle overview .....	5
Specifications .....	6
Rifle design and function .....	7
Bolt .....	8
Valve .....	9
Lockwork .....	9
Pressure controller (regulator) .....	11
Front plug .....	11
Barrel unit .....	12
Rifle assembly order .....	16
Magazine .....	17
Rifle shooting procedure .....	19
Maintenance .....	20
Under-barrel cylinder recharging .....	21
Cylinder discharging .....	22
Barrel unit mounting and dismounting .....	22
Storage and transportation .....	23
Performance check .....	24
Troubleshooting .....	24

*According to the "On Arms" Federal Law of Russian Federation # 150-FZ dated December 13, 1996 and the air guns GOST R 51612-2000 classification, M2 rifles are produced in the three following types:*

- Structurally similar to weapons products with muzzle energy of 0.5 to 3 J regardless of the caliber.*
- Amateur and sports shooting air arms with the caliber up to 4.5 mm (0.177) and the muzzle energy up to 7.5 J.*
- Hunting air arms with the muzzle energy of 7.5 to 25 J regardless of the caliber.*

According to p. 1.1.3 \* of the State Mining and Technical Inspection of Russian Federation Act No 91 dated July 11th, 2003 " On implementing the rules for design and safe operations of pressure-operated vessels" (hereinafter referred to as the Rules), the cylinder mounted on the rifle is not included in the list of the products which is the subject of the Rules and shall not undergo technical examination after mounting, prior to using or during the operation.

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\* The Rules shall not apply to:

- Vessels and cylinders with the capacity of up to 0.025 m<sup>3</sup> (25 l), where the product of pressure in MPa by capacity in m<sup>3</sup> does not exceed 0.02 (200)

# SAFETY CODE

Rifle design ensures safe use only when operated adequately.

## **Please bear in mind!**

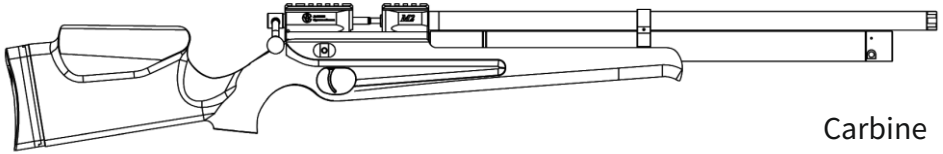
- Treat this rifle as if loaded even with the safety lock activated.
- Never point the rifle at people or animals; do not lean on the rifle.
- The rifle must be loaded only at the firing line.
- After shooting and before leaving the firing line open the bolt, make sure that there is no bullet in the barrel and fire a blank shot into the ground.
- Keep the rifle and bullets out of reach of children and unauthorized people.
- Never remodel or modify any parts and assemblies of the rifle.
- Prevent heating the rifle and the cylinder above + 50°C and cooling below - 10° C.
- Load the rifle with compressed air only with the bolt open.
- Compressed air used for charging must comply with GOST 17433-80.
- Do not use expired or damaged under-barrel cylinders.
- Do not shoot steel, pyrotechnic or hand-made bullets, clay, wax , nails or any other unauthorized objects.
- Never look into the barrel from the barrel end.

**Any signs of unauthorized alteration invalidates the manufacturer's warrant.**

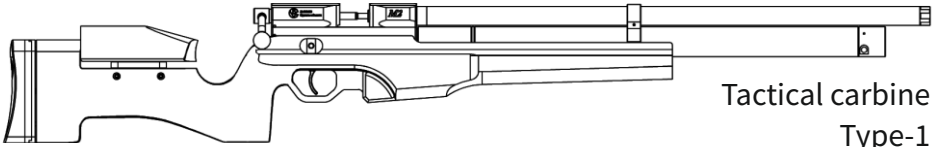
## **It is necessary to conduct a standard check before shooting the rifle:**

- Inspect the cylinder for damages (dents, deep scratches). If there are any defects, it is STRICTLY prohibited to use the rifle due to the possibility of structural failure of the product and injuries.
- Check the gripping of the screws connecting the barrel to the barrel unit. Do not tighten the screws with excessive force, the gripping must be up to 6 N\*m to avoid any damage.
- Check the grip of the screws fastening the body of the rifle to the stock. The screws must be tightened without excessive force – up to 6 N\*m.

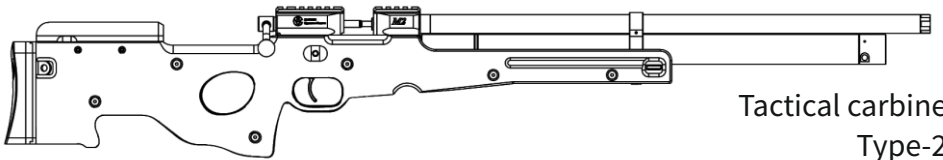
# GENERAL VIEW OF M2 RIFLE



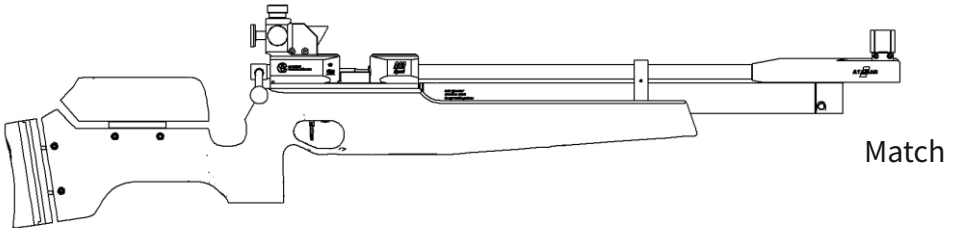
Carbine



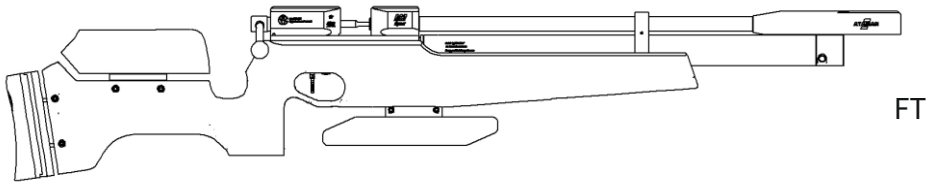
Tactical carbine  
Type-1



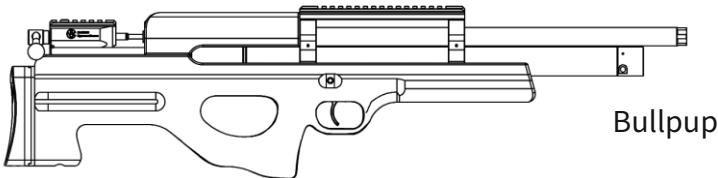
Tactical carbine  
Type-2



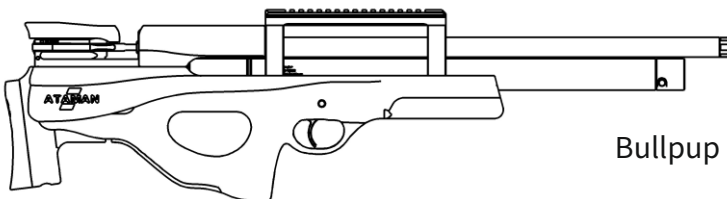
Match



FT

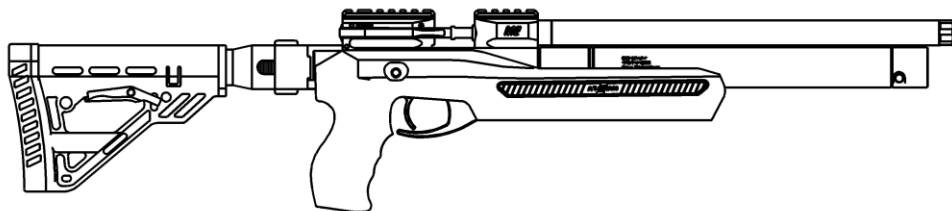


Bullpup



Bullpup (Sidelever)

## M2 ULTRA-COMPACT RIFLE OVERVIEW



Muzzle energy, depending on a rifle type, J, up to	3	25	32
Energy index		H	Export
Caliber	5.5 mm / 0.22		
Number of shots with constant velocity, not less than	50	34	30
Accumulation chamber volume, cm <sup>3</sup>	25		
Cylinder capacity, cm <sup>3</sup>	130		
Maximum compressed air pressure in the cylinder, bar, up to	300		
Cylinder test pressure, bar, not less than	450		
Trigger pull range, kg	0,2-1,0		
Trigger creep range, mm	0,2-2,0		
Barrel length, mm	280		
Length, overall / with a folded butt, mm	822 / 591		
Height, mm	176		
Width (including bolt handle) / with a folded butt, mm	74 / 108		
Weight, kg	2,8		

# SPECIFICATIONS

M2 rifle is intended for using indoors in the shooting galleries and outdoors at temperatures of -5 °C to +40 °C.

The make of the rifle, manufacturer's brand and country, the caliber of pellets used in mm and inches, muzzle energy index and the number on the rifle are indicated in Russian on the right side of the rifle's shell.

Muzzle energy, depending on a rifle type, J, up to	3	7,5	25
Energy index		F	H
Caliber, depending on a type of the rifle, mm (inch)	4.5 (.177) 5.5 (.22) 6.35 (.25)	4.5 (.177) 5.5 (.22)	4.5 (.177) 5.5 (.22) 6.35 (.25) 7.62 (.30)
Number of shots with constant velocity, depending on a type	180/90/60	150	120/60/30/
Accumulation chamber volume (cal. 4.5 (.177) / 5.5 (.22) / 6.35	9/25/38/59/67		
Cylinder capacity (long / standard / compact) without pressure controller / regulator, cm <sup>3</sup>	285/250/200		
Maximum compressed air pressure in the cylinder, bar, up to	300		
Cylinder test pressure, bar, not less than	450		
Trigger pull range, kg	0.2-1.0		
Trigger creep range, mm	0.2-2.0		
Barrel length, mm	420/520 650 (only for 7.62 (.30) and 9 (.35)		
Maximum length (Carbine / Tactical Carbine type 1 / Tactical Carbine type 2 / Match / FT / Bullpup), mm	1100/1100/1100/1060/1060/820		
Height, mm	170-215		
Width (including bolt handle), mm	72-75		
Weight (Carbine / Tactical Carbine type 1 / Tactical Carbine type 2 / Match / FT / Bull-pup), kg	3.8/4.2/4/4.6/4.5/3.9		

# RIFLE DESIGN AND FUNCTION

As the rifle is constantly being improved, the manufacturer reserves the right to make changes that improve or do not affect the specifications.

M2 rifle consists of the barrel unit; barrel receiver; firing trigger; bolt; firing device; valve; under-barrel high-pressure cylinder bracket with rail, assembled stock and safety lock. The connection of the barrel unit with the receiver housing is detachable.

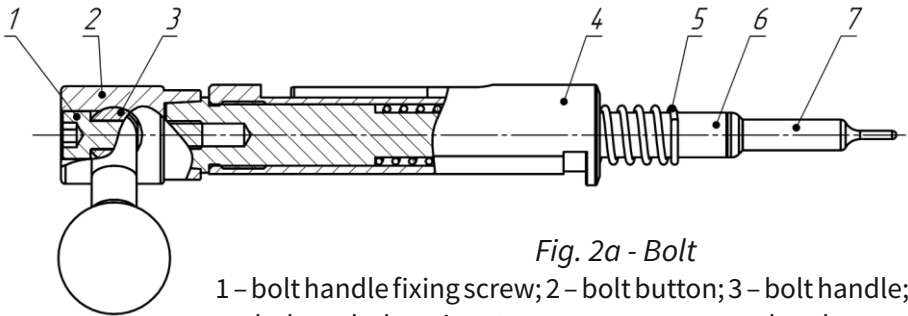
The rifle is equipped with a built-in cutter. The cutter (separator) cuts off a stream of compressed air that follows the bullet and improves bullet trajectory dispersion parameters. The Picatinny / Weaver rail is milled at the top of the receiver and is used for mounting sights and/or other equipment.

- When the bolt handle is turned up and retracted, the hammer is cocked. Simultaneously the bolt is locked open, revealing the loading port thus allowing to insert the bullet.
- While the bolt is moved forward, the rammer head pushes the bullet into the barrel and places it beyond the by-pass port.
- When the bolt handle is turned down in the forward-most position, the bolt is detented.
- Pressing the trigger releases the hammer from the sear. Affected by the firing spring, it moves forward and hits the valve stem. The stem moves away from the seat, and a portion of air enters the barrel through the by-pass port, causing a shot.
- After the shot is made, the pressure controller / regulator drops open, and compress air moves from the cylinder to the accumulation chamber, filling it up until the pressure reaches the preset level. The cycle is repeated in further firing.



# BOLT

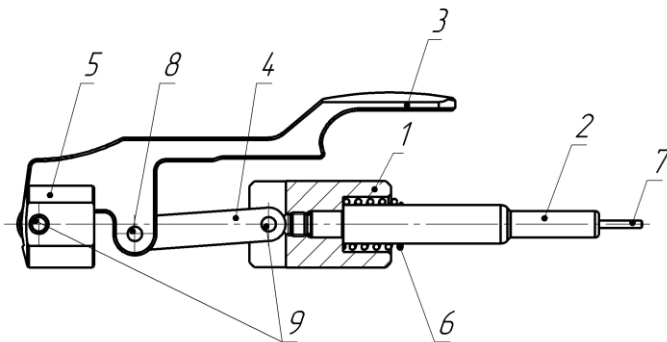
Sliding breech bolt (fig. 2). Locking is performed by turning the bolt handle. There is a screw which gets into in the bolt slot and serves as a guide for it in the upper part of the receiver. It is necessary to press the button 2 and then after having disengaged it by turning the handle 3 up, to pull back to open the bolt. **The bolt should have no obstacles when being opened!** The bolt sets the trigger firing pin and the sear into full-cock position. This is followed by light click. It is necessary to move the bolt in the forward most position and to fix it by turning the handle down to close the bolt. Do not apply excessive



*Fig. 2a - Bolt*

- 1 – bolt handle fixing screw; 2 – bolt button; 3 – bolt handle;
- 4 – bolt; 5 – bolt spring; 6 – rammer; 7 – rammer head

Sidelever (fig. 2b). To open the bolt it is required to put the lever 3 into the rearmost position. There must be no obstacles while opening the bolt! The bolt sets the trigger hammer and the sear into full-cock position. A light click is felt. To close the bolt, it is required to put the lever 3 into the forward most position. Do not apply excessive force to open or close the bolt.

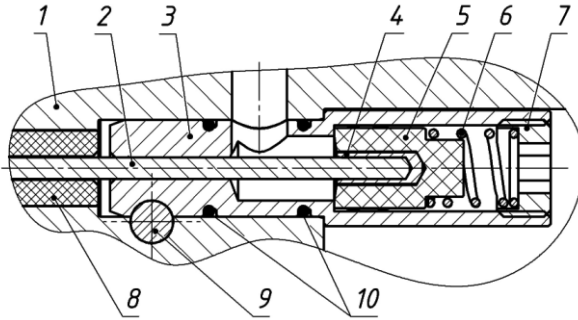


*Fig. 2b - Sidelever*

- 1 – sidelever bolt; 2 – sidelever rammer; 3 – sidelever lever; 4 – sidelever piston rod;
- 5 – sidelever lever holder; 6 – sidelever bolt spring; 7 – needle runner; 8 – pin;
- 9 – needle runner.

# VALVE

The valve (fig. 3) is used for dosing compressed air required for a shot. Structurally it is made as a separate unit. The O-rings are used to seal the receiver with a valve sleeve. The spring provides initial valve load. The valve stock is made of tempered and ground impact-resistant steel and transmits

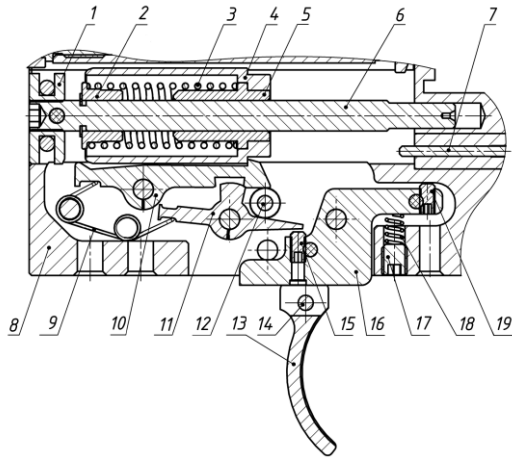


*Fig. 3 - Valve*

1 – receiver; 2 – valve stem; 3 – valve sleeve; 4 – valve bush; 5 – valve;  
6 – valve spring; 7 – valve cover; 8 – guide bush; 9 – valve sleeve retaining  
pin; 10 – O-rings

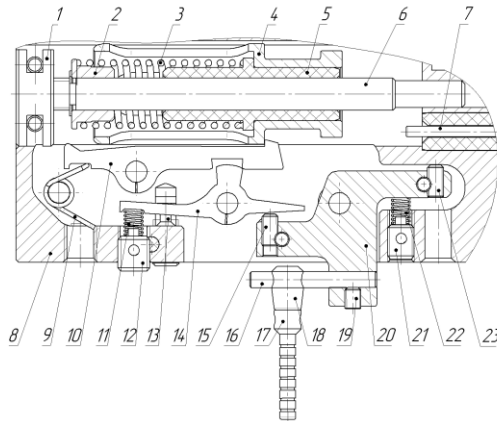
# LOCKWORK

The lockwork (fig. 4a and 4b) is based on a double-sear scheme. When the hammer moves back, the sear is fully cocked. The secondary sear is released thus locking the sear in the cocked position. When the trigger is pulled, the trigger base depresses the secondary sear by means of the adjusting screw. The hammer is de-cocked. It slides along the guide and hits the valve stem.



*Fig. 4a – Lockwork*

- 1 – hammer plug; 2 – hammer spring bushing; 3 – hammer spring; 4 – hammer; 5 – hammer housing; 6 – hammer guide; 7 – valve stem; 8 – barrel receiver; 9 – lockwork spring; 10 – sear; 11 – secondary sear; 12 – safety lock; 13 – trigger; 14 – trigger screw; 15 – trigger creep adjusting screw; 16 – trigger base; 17 – trigger pull adjustment screw; 18 – trigger pull spring;



*Fig. 4b – Match / FT lockwork*

- 1 – hammer plug; 2 – hammer spring bushing; 3 – hammer spring; 4 – hammer; 5 – hammer housing; 6 – hammer guide; 7 – valve stem; 8 – barrel receiver; 9 – lockwork spring; 10 – sear; 11 – trigger pull spring; 12 – trigger pull adjustment screw; 13 – trigger creep adjusting screw; 14 – secondary sear; 15 – trigger pin first stage adjusting screw; 16 – trigger pin guide; 17 – trigger pin; 18 – trigger pin holder; 19 – trigger pin guide screw; 20 – trigger pin base; 21 – first stage pull crew; 22 – first stage pull spring; 23 – trigger pin base hold screw

# PRESSURE REGULATOR

Pressure regulator is designed to reduce the initial pressure in the under-barrel cylinder to the operation pressure in the accumulation chamber. The pressure reducing valve is tuned in a factory environment on a special stand with electronic pressure sensors according to the specific procedure. **Any unauthorized reconfiguration of the pressure reducing valve is PROHIBITED and may result in malfunction or damage.** Depending on the make and furnishing of the product, the regulator can be twisted directly into

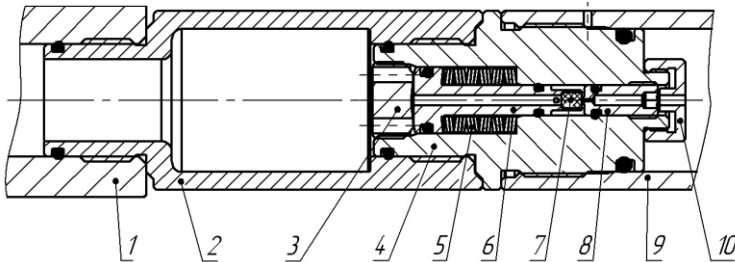


Fig. 5 – Pressure reducing valve

1 – barrel receiver; 2 – accumulation chamber; 3 – reducing valve piston plug; 4 – reducing valve casing; 5 – dished spring; 6 – piston; 7 – seating; 8 – reducing valve nozzle stem; 9 – cylinder; 10 – reducing valve cover; the O-rings are accentuated with black

# FRONT PLUG

The front plug includes the pressure indicator and the charging port, by means of which the under-barrel cylinder is filled. The screw with an O-ring serves as a back-flow valve.

During the charging process compressed air passes through the turn of the thread gaps, moves the seal to the cylinder wall and gets inside. When the pressure on the charging side reduces, the pressure in the cylinder pushes

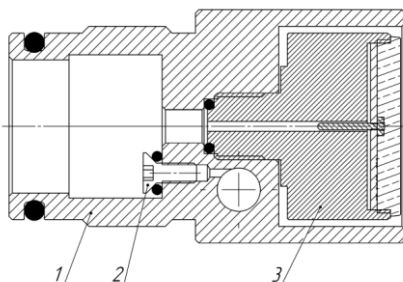


Fig. 6 – Front plug

1 – front plug; 2 - screw;  
3 – pressure indicator

# BARREL UNIT

The barrel unit for the 4.5 (.177) / 5.5 (.22) / 6.35 (.25) calibers is produced in two options: full-size with a built-in separator (fig. 7a), and a compact one equipped with a cutter (fig. 7b). The barrel is twisted into the barrel collar that has a bypass port. Threadably connected with the barrel, separator (5, fig. 7a) or cutter (7, fig. 7b) is fastened to the casing mounted to the barrel collar. Barrel length itself is the same for the both options.

The bypass port is made in the barrel collar for 7.62 (.30) caliber (fig. 7c); for 9 (.35) caliber it is made in the barrel; and the barrel unit collar with a thread for

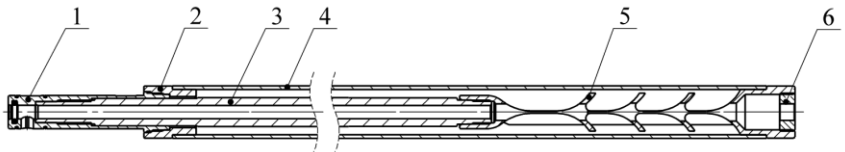


Fig. 7a – Barrel unit with separator



Fig. 7b – Barrel unit with cutter

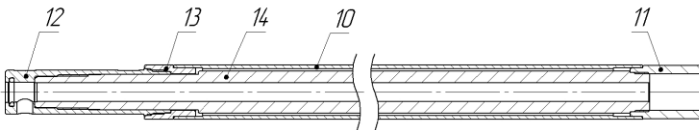


Fig. 7c – 7.62 (.30) caliber barrel unit

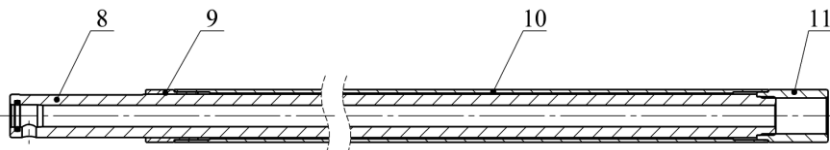
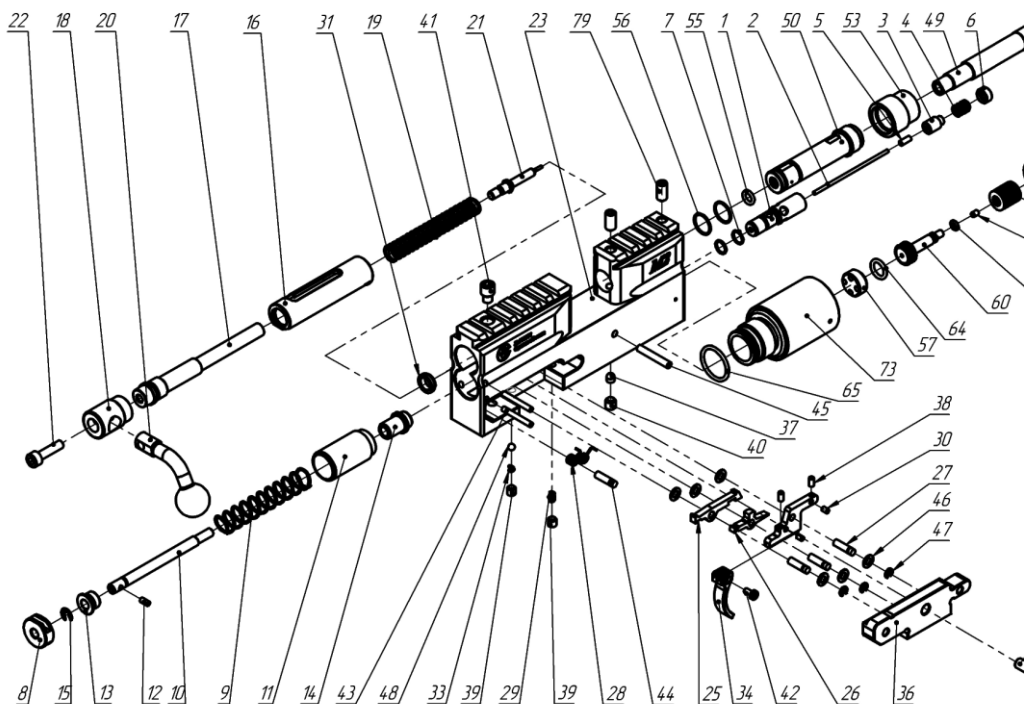
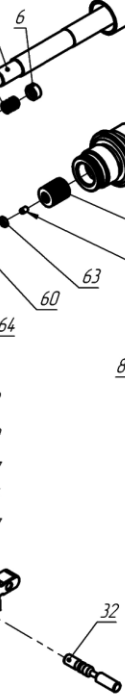
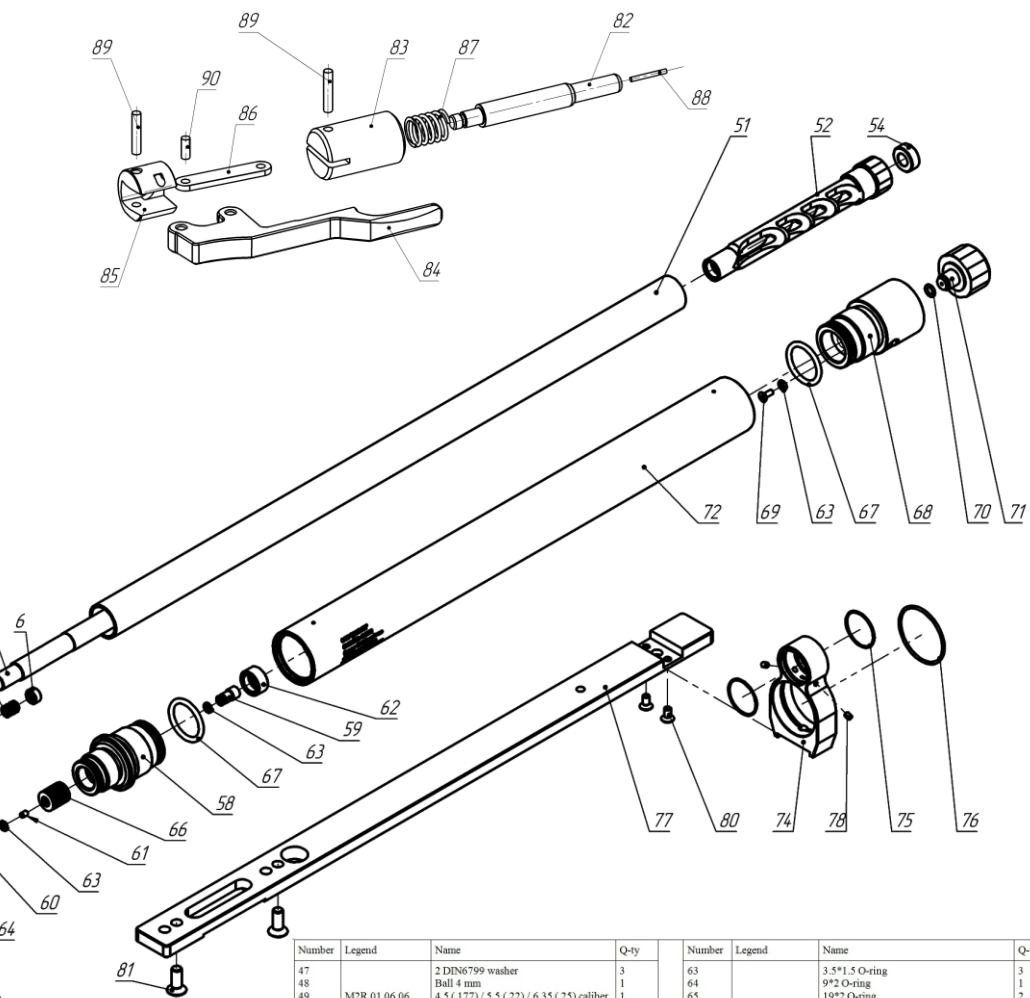


Fig. 7d – 9 (.35) caliber barrel unit

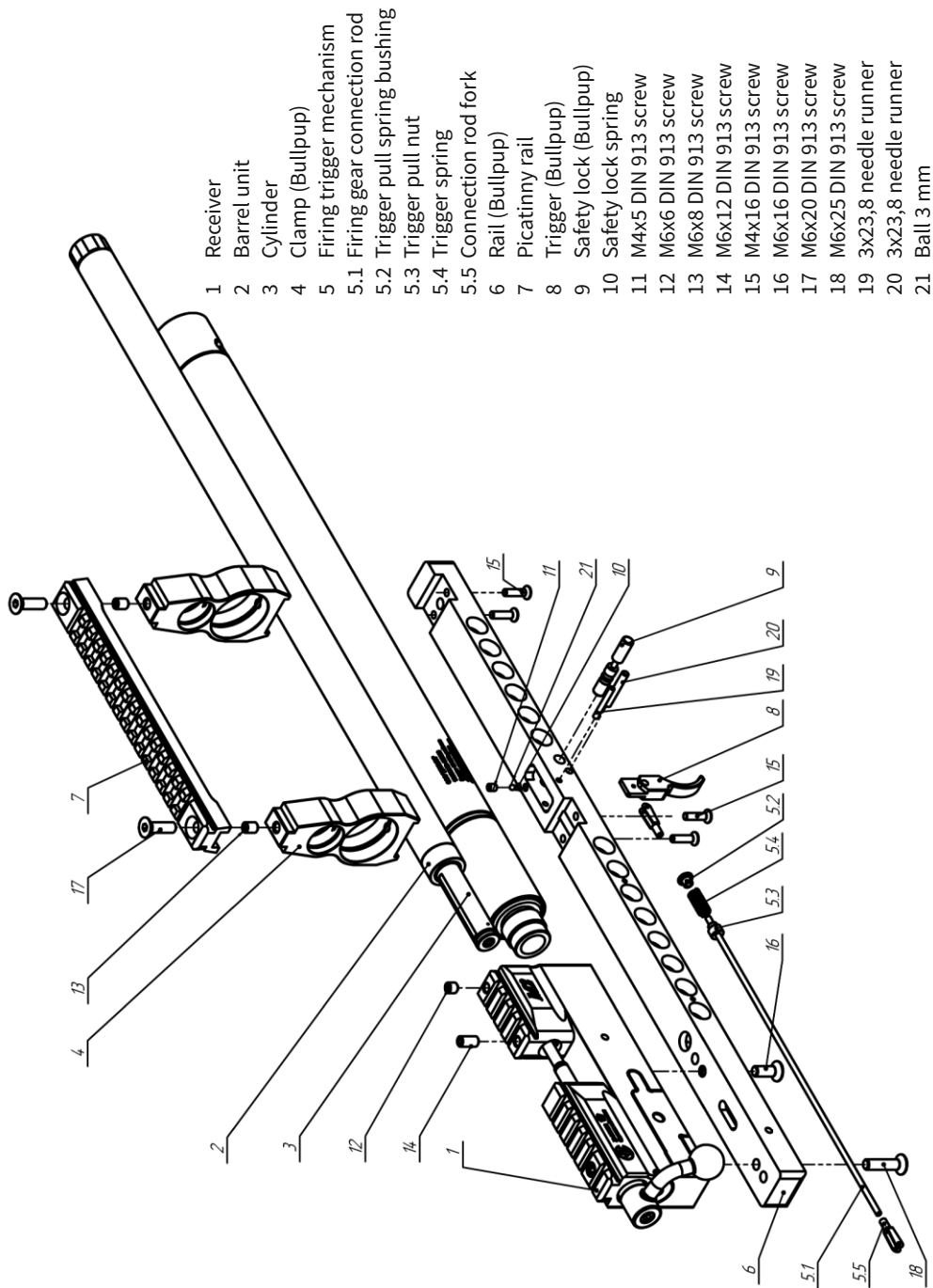
- 1 – barrel collar; 2 – casing collar; 3 – barrel; 4 – casing; 5 – separator;
- 6 – casing front collar; 7 – cutter; 8 – 9 mm (.35) caliber barrel; 9 – 9 mm (.35) caliber casing collar; 10 – 9 mm (.35) caliber casing; 11 – 9 mm (.35) caliber barrel unit collar; 12 – 7.62 mm (.30) caliber barrel collar; 13 – 7.62 mm (.30) caliber casing collar; 14 – 7.62 mm (.30) caliber barrel

Number	Legend	Name	Q-ty	Number	Legend	Name	Q-ty
1	M2R.01.04.01	Valve sleeve	1	24	M2R.01.16.01	Trigger base	1
2	M2R.01.05.01	Valve stem	1	25	M2R.02.01.01	Extended trigger base	1
3	M2R.01.04.02	Valve	1	26	M2R.01.01.15	Sear	1
4	M2R.01.04.04	Valve spring	1	27	M2R.01.01.16	Secondary sear	1
5	M2R.01.05.02	Valve bushing	1	28	M2R.01.01.07	Lockwork axis	3
6	M2R.01.04.03	Valve plug	1	29	M2R.01.01.13	Lockwork spring	1
7		7*1 O-ring	2	30	M2R.01.01.12	Trigger pull spring	1
8	M2R.01.03.04	Hammer plug	1	31	M2R.01.16.02	Trigger base trigger rod	2
9	M2R.01.03.06	Hammer spring	1	32	M2R.01.01.01	Bolt housing	1
10	M2R.01.03.03	Hammer guide-way	1	33	M2R.01.01.08	Safety lock	1
11	M2R.01.03.07	Hammer	1	34	M2R.01.01.11	Safety lock spring	1
12	M2R.01.03.05	Hammer friction rod	1	35	M2R.01.01.17	Trigger	1
13	M2R.01.03.01	Hammer spring bushing	1	36	M2R.01.01.06	Valve stem guide	1
14	M2R.01.03.02	Hammer housing	1	37	M2R.01.01.05	Receiver cover	1
15		DIN6799 4 washer	1	38	M2R.01.01.02	Trigger valve plug	1
16	M2R.01.02.05	Bolt	1	39		M3*6 DIN 913 screw	2
17	M2R.01.02.05-01	Left-hand bolt	1	40		M5*5 DIN 913 screw	2
18	M2R.01.02.01	Bolt rammer	1	41		M6*6 DIN 913 screw	1
19	M2R.01.02.02	Bolt button	1	42		M8*12 DIN 915 screw	1
20	M2R.01.02.03	Bolt spring	1	43		M3*6 DIN 7984 screw	1
21	M2R.01.02.04	Bolt handle	1	44		3*23,8 needle runner	2
22	M2R.01.04.01	Rammer head	1	45		4*15,8 needle runner	1
23	M2R.01.01.04	Receiver	1	46		4*25,8 needle runner	1
						4,3 DIN 433 washer	6



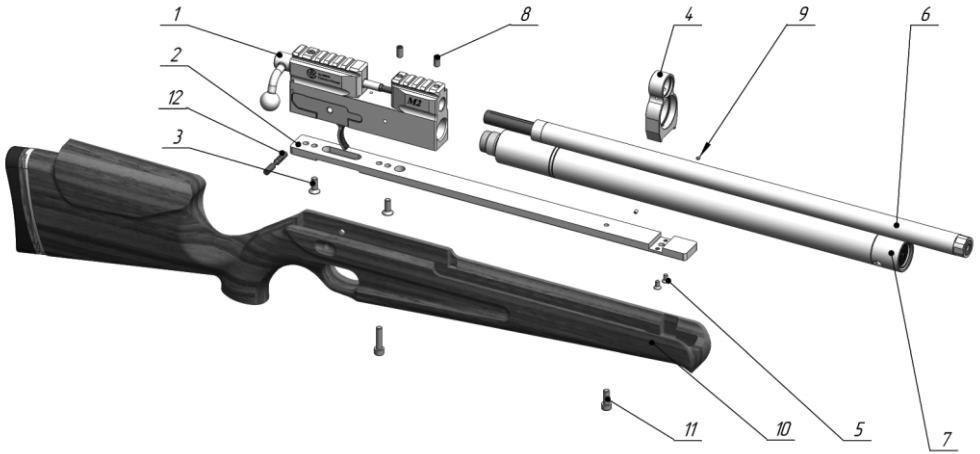


Number	Legend	Name	Q-ty	Number	Legend	Name	Q-ty
47		2 DIN6799 washer	3	63		3.5*1.5 O-ring	3
48		Ball 4 mm	1	64		9*2 O-ring	1
49	M2R.01.06.06	4.5 (1.77) / 5.5 (22) / 6.35 (25) caliber barrel	1	65		19*2 O-ring	2
	M2R.01.25.01	7.62 (30) caliber barrel	1	66		12.5*6, 2*0.7 DIN2093B spring	18
	M2R.01.24.01	9 (35) caliber barrel	1	67		22.2*3 O-Ring	1
50	M2R.01.06.02	Barrel collar (Caliber 4.5 (1.77) / 5.5 (22) / 6.35 (25))	1	68	M2R.01.11.01	Front plug casing	1
	M2R.01.25.03	Barrel collar (Caliber 7.62 (30) / 9 (35))	1	69		M3*6 DIN7991 screw	1
51	M2R.01.06.03	Shroud	1	70		5*1.5 O-Ring	1
	M2R.01.06.03-01	Compact shroud	1	71		Pressure gauge	1
	M2R.01.24.04	Shroud Caliber 9 (35)	1	72		Cylinder tube	1
52	M2R.01.06.05	Separator 5.5 (22) / 6.35 (25)	1	73		Accumulation chamber casting (Cal. 5.5 (22) / 6.35 (25) / 6.2 (30) / 9 (35))	1
	M2R.01.12.01	Cutter Caliber 4.5 (1.77) / 7.62 (30) / 9 (35)	1	74		Clamp	1
53	M2R.01.06.01	Shroud collar	1	75	M2R.01.08.02	22*1 O-Ring	2
	M2R.01.25.01	Shroud collar Caliber 7.62 (30)	1	76	M2R.01.08.01	35*1.5 O-ring	1
	M2R.01.24.02	Shroud collar Caliber 9 (35)	1	77		Rail	1
54	M2R.01.06.04	4.5 (1.77) barrel unit plug	1	78	M2R.01.07.01	M3*4 DIN 913 screw	2
	M2R.01.06.04-01	5.5 (22) / 6.35 (25) barrel unit plug	1	79		M6*12 DIN 913 screw	2
	M2R.01.24.05	9 (35) barrel plug	1	80		M4*8 DIN 7991 screw	2
55		6.35*1.78 ring (Cal. 6.35 (25))	1	81	M2R.01.00.01	M6*16 DIN 7991 screw	2
		5.7*1.9 ring (Cal. 5.5 (22))	1	82	M2R.01.30.05	Sidelever runner	1
		4.7*1.42 ring (Cal. 4.5 (1.77))	1	83	M2R.01.30.04	Sidelever bolt	1
		8*2 ring (Cal. 7.62 (30))	1	84	M2R.01.30.02	Sidelever lever	2
		9*2 ring (Cal. 9 (35))	1	85	M2R.01.30.01	Sidelever lever holder	1
56		12*1 O-ring	2	86	M2R.01.30.03	Sidelever piston rod	1
57	M2R.01.09.01	Regulator piston plug	1	87	M2R.01.02.03-01	Sidelever bolt spring	2
58	M2R.01.09.02	Regulator casting	1	88		1.5*13.8 Needle runner	2
59	M2R.01.09.04	Nozzle screw	1	89		3*15.8 Needle runner	2
60	M2R.01.10.01	Piston	1	90		3*8 pin	2
61	M2R.01.10.02	Seating	1				
62	M2R.01.09.03	Regulator cover	1				





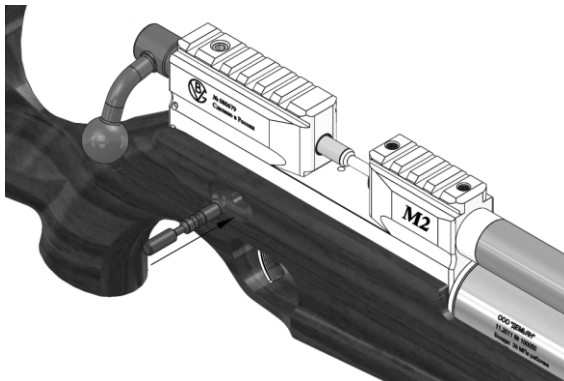
# RIFLE ASSEMBLY ORDER



*Fig. 8 – Rifle assembly order*

1 – receiver; 2 – rail; 3 – rail adjustment screw; 4 – clamp; 5 – clamp to rail adjustment screws; 6 – barrel unit; 7 – cylinder; 8 – barrel unit to receiver adjustment screws; 9 – barrel unit adjustment screws;

- Adjust rail 2 to the receiver 1 with screws 3.
- Secure clamp 4 on the rail with screws 5.
- Mount the barrel unit (see Barrel unit mounting and dismounting).
- Attach the cylinder.
- Adjust stock to the rail with screws 11.
- Cock the bolt and mount the safety lock, positioning it as shown at fig. 9 (two

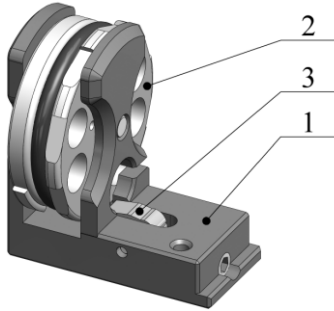


*Fig. 9 – Safety lock installation*

# MAGAZINE

Semi-automatic magazine is designed to ease the process of loading pellets into the rifle. During the process of filling the magazine, its drum rotates clockwise, thus cocking the spring.

## FILLING THE MAGAZINE



To fill the magazine (Fig. 10) press the latch 3 and, keeping the drum 2 from sharp turning, set it to the end position. Insert the appropriate caliber bullets into the open chambers on the left and right sides. Rotate the drum clockwise, filling all the chambers until the drum stops in the end position.

The magazine is ready for service.

*Fig.10 - Magazine*

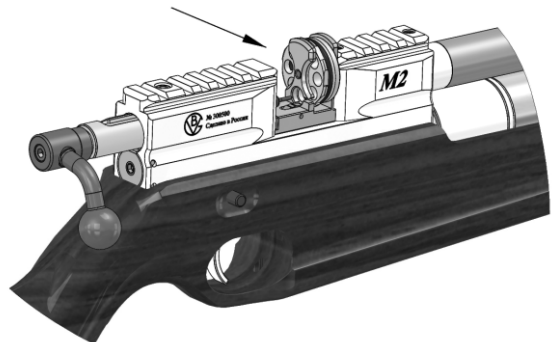
1 – magazine body; 2 – magazine drum; 3 – magazine latch

**Do not use deformed or dirty pellets. Do not reuse the bullets. Do not use the pellets that protrude beyond the drum chambers.**

In order to avoid the falling of the pellets out of the chambers, it is necessary to monitor the accuracy of their retaining by the seal ring. If necessary, lubricate the ring; replace if damaged.

## MAGAZINE INSERTION AND FIRING ORDER

- Open the bolt, insert the magazine from the left side of the rifle, locating it off the receiver slot and the barrel unit extension by moving it to the right all the way in (Fig. 11).
- Close the bolt pushing a bullet from the drum into the barrel. Make a shot.



*Fig. 11 – Magazine insertion*

- During the bolt opening, the drum rotates automatically, revealing the next chambers.
- Repeat the magazine filling procedure after the last shot.

The first magazine installation may require adjustment of a gap between the barrel collar and the magazine body. In this case follow the following instructions:

- Release the barrel unit (see Barrel unit mounting and dismounting) and move it forward.
- Mount the magazine on the receiver.
- Move the barrel unit back (until its edge touches the magazine slot).
- Secure the barrel unit without tightening the receiver and clamp screws.
- Check the magazine installation mounting and dismounting it several times.
- Fasten the barrel unit.

# **RIFLE SHOOTING PROCEDURE**

1. Move the bolt (see page 6) to the rearmost position.
2. Insert a bullet.
3. Close the bolt, ramming the bullet into the barrel.
4. Smoothly pulling the trigger, make a shot.
5. Repeat pts1-4 for subsequent shots.
6. Monitor the gauge pressure in the cylinder. If it is below its operating level, charge the rifle with compressed air.
7. After the shooting is over, make a blank shot into the ground.

For the purposes of training and practice, pull the trigger with the bolt opened. When the trigger is pulled, the bolt moves 10 mm forward, and the clockwork actuates. Pull the bolt back for the next training shot.

# MAINTENANCE

## **Lockwork adjustment (Fig. 4a)**

- The trigger pull is adjusted with screw 17. The pull is increased clockwise.
- Ending position of the trigger is adjusted with screw 19.
- The free play adjustment of the intermediate sear is effected by the screw 15. and the screw 19 (reduced clockwise).
- The trigger is adjusted by half-loosening screw 14 and moving the trigger along the base guide 16.

## **Match / FT lockwork adjustment (Fig. 4b)**

- The trigger first stage travel is adjusted by screw 21. The pull is increased clockwise.
- The first stage length is adjusted by screw 15 (reduced clockwise).
- Trigger end position is adjusted by screw 23.
- The trigger second stage travel is adjusted by screw 12. The pull is increased clockwise.
- The second stage length is adjusted by screw 13 (increased clockwise).
- The trigger pin 17 is adjusted by loosening itself by half-turn and moving it along the base guide 16.

It is necessary to check the reliability of the rifle after the lockwork adjustment (make sure that the hammer will not de-cock spontaneously):

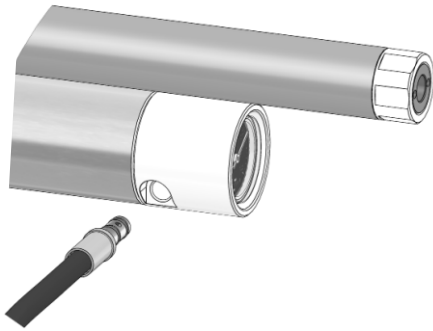
- Cock the rifle and shoot without bullets several times, making sure that the hammer is placed on the sear properly. The cover of the rifle must be taken off in order to monitor the operation of the lockwork visually.
- Lock and unlock the rifle several times, making sure that the activated safety lock restricts the rifle from shooting.
- Tap the rifle receiver with wooden or rubber hammer making sure that the taps do not lead to the lockwork parts displacement.
- Having adjusted the body of the rifle to the stock, cock the rifle and cautiously hit the butt-stock upon a firm surface several times within the distance of 20-30 cm. Make sure that a shot didn't occur.
- Check the safety lock performance. If the lock doesn't move to the right, loosen the adjusting screw counter-clockwise by half-turn.
- If everything is in accordance, the rifle is ready for use with new lockwork

## UNDER-BARREL CYLINDER CHARGING

Use filtered and dried compressed air for recharging. Make sure that there is no damage or dirt on the nozzle and the filling part front plug.

It is necessary to obey the following safety code during recharging:

- Recharge the rifle only with the bolt open!
- Place the rifle horizontally on the surface and perpendicularly to the hose with the nozzle while refilling.
- Do not bend the filling hose while recharging.
- Do not conduct the refilling in the presence of children and pregnant



*Fig. 12 – Cylinder charging*

Charging Sequence:

1. Connect the filling station to the compressed air source and close the bleed screw.
2. Gently insert the nozzle into the filling port in the cylinder front plug all the way in.
3. Fill the cylinder with compressed air until the required value.
4. Close the valve on the compressed air

5. Release pressure in the filling station using the bleed screw and remove the nozzle from the filling port of the cylinder front plug.

**Always make sure that the air is drained out of the filling station!**

**Do not apply excessive force when plugging and unplugging the nozzle in order not to damage the O-Rings.**

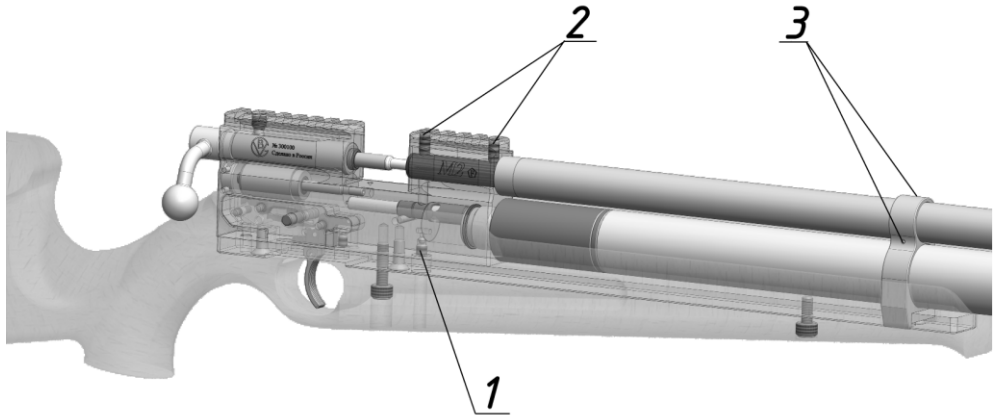
It is recommended to apply a thin layer of a silicon vacuum grease or oil to the filling nozzle seal occasionally.

## CYLINDER DISCHARGING

In order to decompress the under-barrel cylinder, loosen the screw 1 (Fig. 13). The pressure in the cylinder will drop completely in several minutes. Check this by making a blank shot.

### **Air hissing absence doesn't always mean that the air has left off totally.**

The cylinder pressure must be checked against the indicator in the front plug. When the pressure drops to the atmospheric level, tighten the screw 1.



*Fig. 13 - Pressure release in the cylinder*

1 – pressure release screw; 2 – locking screws;

## **Barrel unit mounting and dismounting**

The barrel unit is removed for a periodic inspection and cleaning (Fig. 13).

- Using the Allen key loosen the locking screws 2 in the top of the receiver for 3-4 revolutions and unscrew the screws 3 that secure the barrel unit in the clamp.
- Having greased the barrel unit in order to ease its sliding in the clamp, carefully remove the barrel unit.
- Never shoot cleaning patches from a rifle with a built-in separator, as they may stuck during the shooting.
- The barrel unit must be installed with the flat part upwards.
- The barrel unit mounting to the receiver and the clamp screws must be

## **STORAGE AND TRANSPORTATION**

The rifle must be stored and transported only with the hammer de-cocked and without a bullet in the barrel!

Store the rifle in safety conditions. Exclude any unauthorized access.

In order to be maintained in operative conditions, your rifle must be cleaned and dried from condensation products.

There must not be any oil in the hammer and the hammer chamber. This unit is at its most stable at the unlubricated friction conditions. Other metal parts must have a thin layer of grease without any streaks and spots.

The rifle should be kept in a case. The hammer must be de-cocked. The cylinder must have a residual pressure of 100 bar.

It is possible to store the rifle depressurized, but it may be necessary to disassemble the cylinder and lubricate all the rubber seals before using.

The rifle can be transported in all kinds of transportation in covered vehicles. Use the screw to decompress the rifle before flying an airplane, as the transportation of high-pressure cylinders by air is prohibited (see Cylinder discharging).

Use a carrier or a special case to transport the rifle, protecting it from bumps



# PERFORMANCE CHECK

1. Press the bolt button with your thumb and, having turned the bolt handle up, pull it back. The hammer gets cocked.
2. Close the bolt so that it engages in the forward most position.
3. Check the trigger performance with a blank shot.

# TROUBLESHOOTING

**ATTENTION! It is mandatory to learn the safety precautions (p. 3) if you troubleshoot on your own!**

1. The rifle doesn't shoot

Make sure the rifle is pre-charged with compressed air.

Make sure that the hammer is cocked when the bolt is opened.

Check if there are any bullets in the barrel from the previous shooting attempts. If necessary, push them using the cleaning brush in the direction of bullet's motion, having removed the barrel unit.

2. The rifle is not cocked when the bolt is open

Check the bolt channel. If necessary, clean the dirt off the channel and the bolt. Loosen the firing action spring compression. In order to do it, turn the hammer guide 7 (Fig. 3) counterclockwise.

3. Muzzle velocity gaps are more than 1%

Check the hammer channel for foreign objects, grease, dirt and remove them.

Use the higher-quality bullets.

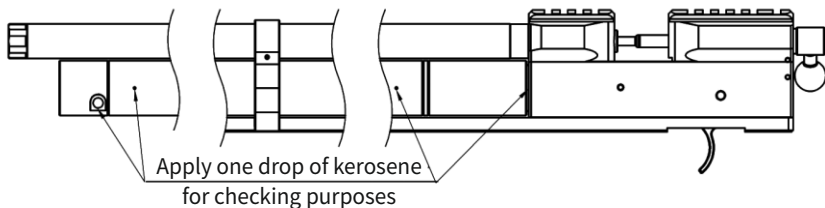
Make sure all the trigger springs are set in the required direction.

Increase the interval between shots to 10-30 seconds.

4. The rifle slowly drains the air out

Identify a leak point: apply oil or kerosene to the points shown on Fig. 14. Foam or bubbles will appear at the leak point. Replace the damaged seal.

Check the pressure relief screw tightening. It is often left unscrewed after assembly. Do not apply excessive force (up to  $6\text{ N}\cdot\text{m}$ )!



*Fig. 14 - Leaking check*

5. Accuracy decrease

Clean up the barrel.

Replace the bullets with the higher-quality ones.

Check the barrel adjustment to the receiver and the muzzle device grip on the barrel.

6. The rifle is not charged although the air is delivered from the attached nozzle

Replace the nozzle or its seals.

Loosen the valve screw by giving it a 1/4 turn (or contact the manufacturer).

**In other cases, contact the manufacturer or certified service centers.**



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