

AMERICAN AIR ARMS

EVOL HPS

HIGH PERFORMANCE SYSTEM



OPERATORS MANUAL



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SAFETY

Safety Rules for all guns


1. Always keep your rifle pointed in a safe direction.
2. Always treat your rifle as it is loaded.
3. Always keep your finger off the trigger until you are ready to shoot.
4. Always be sure of your target and what is behind it.

 This air gun is not a toy. Improper or reckless use may cause severe injury or death.

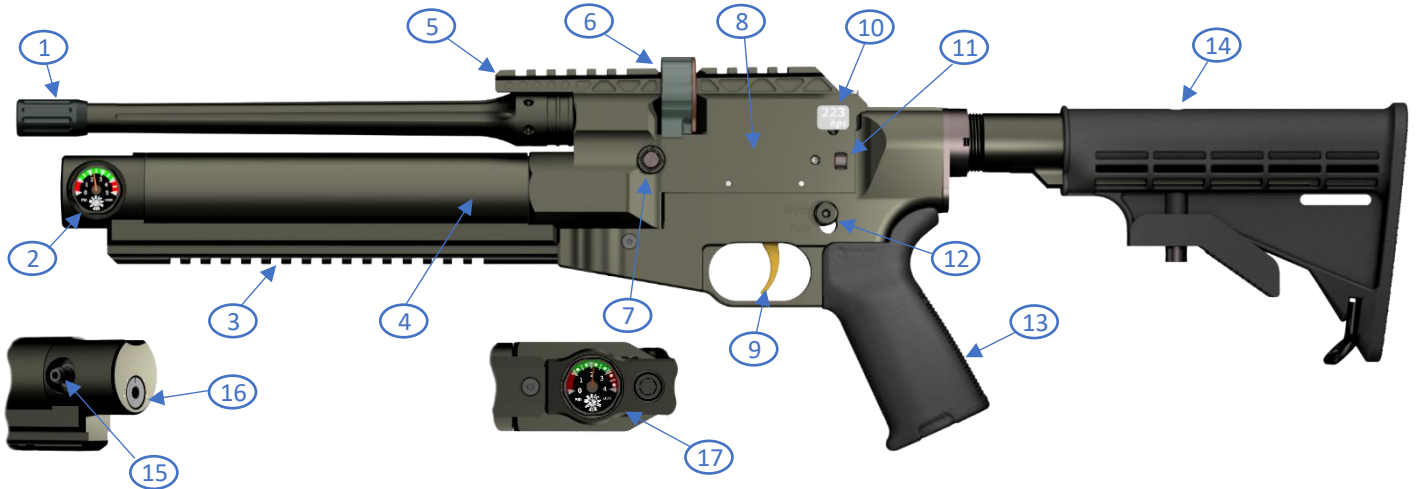
INFORMATION

Congratulations! Your new EVOL hps represents the state of the art in Airgun design, engineering, materials, and construction. EVOL hps has many unique design features not found in other Airguns making the hps a very versatile platform for the ultra-competitive to the most demanding sporting shooter.

- Sub-Moa ultra precision cut rifled barrel
- Balance valve exclusive to American Air Arms
 - Ultralight cocking effort
 - No dynamic O-rings
 - Ultra-smooth lightweight hammer system
 - Adjustable dwell provides large power adjustment range
- Externally adjustable regulator
- 5-axis CNC matched porting developed with CDF software







 This manual is intended to familiarize you with the features of your new EVOL hps. If you have any questions about any of the information presented, please contact your dealer for additional assistance.

PARTS OF THE HPS



- | | | |
|--|----------------------------|------------------------------|
| 1. Thread protector, suppressor attachment | 7. Valve dwell adjustment | 14. Buttstock |
| 2. Reservoir pressure gauge | 8. Receiver | 15. Foster fill port |
| 3. Picatinny rail | 9. Trigger | 16. Regulator adjustment |
| 4. Reservoir | 10. Magnetic caliber plate | 17. Regulator pressure gauge |
| 5. Picatinny rail, scope mount 25 MOA included | 11. Hammer adjustment | |
| 6. Magazine | 12. Safety | |
| | 13. Grip | |


FILLING YOUR AIR RIFLE WITH AIR

-  High-pressure air demands respect. Always obey pressure all ratings and inspect hoses, connectors, valves and for physical damage.
-  Inexpensive air compressors without proper oil and water separation are not acceptable and will void warranty.
-  Poor quality fittings made of brass or aluminum are not acceptable for high-pressure air systems.
-  EVOL hps has a maximum fill pressure of 4,500 psi (310 bar). Do not exceed. (Previous versions of EVOL are 4000 psi (275 bar))
-  Use only clean, dry high-pressure air or nitrogen. Other gases are not safe and will damage your Airgun.
-  EVOL uses the industry standard Foster QD fitting. No specialty probes or adapters are required. Always fill slowly to avoid excessive heat in the gun's reservoir. A complete fill cycle should be no less than 20 seconds.

TOPPING OFF

1. Connect the fill whip from your tank to the male foster; make sure it is positively locked.
2. Make sure the bleed valve on your fill system is closed.
3. Slowly open the valve on the fill system allowing air to flow into the gun. The rate of fill should be slow and steady to avoid rapid heating of the cylinder.
4. Close the fill system valve when the desired fill pressure is reached.
5. Open the fill system bleed valve to relieve pressure in the fill hose.
6. Disconnect the fill system Foster from the gun.

FILLING FROM EMPTY – 0 PSI

 Filling the EVOL hps from empty will require these special steps if the valve is in the open position or is allowing air to escape through the muzzle.

1. Apply safety to the SAFE position.
2. Bring sidelever/bolt to the fully open position.
3. Insert Chamber plug fully into the breech.
4. Fill slowly, the valve will snap shut and the reservoir will begin to take air. There may be some leakage out of the muzzle until the valve shuts; this is normal.
5. Continue filling to approximately 2k psi, let the reservoir cool for about 5 minutes. The chamber Plug can now be removed and the gun de-cocked.
6. Continue filling until desired pressure is reached.

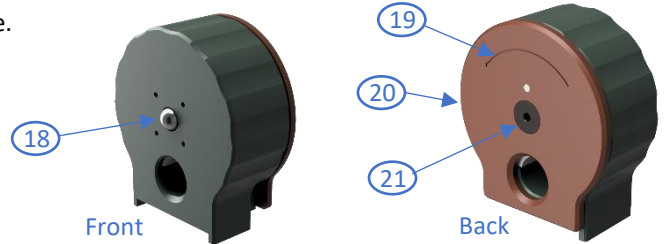
Chamber Plug



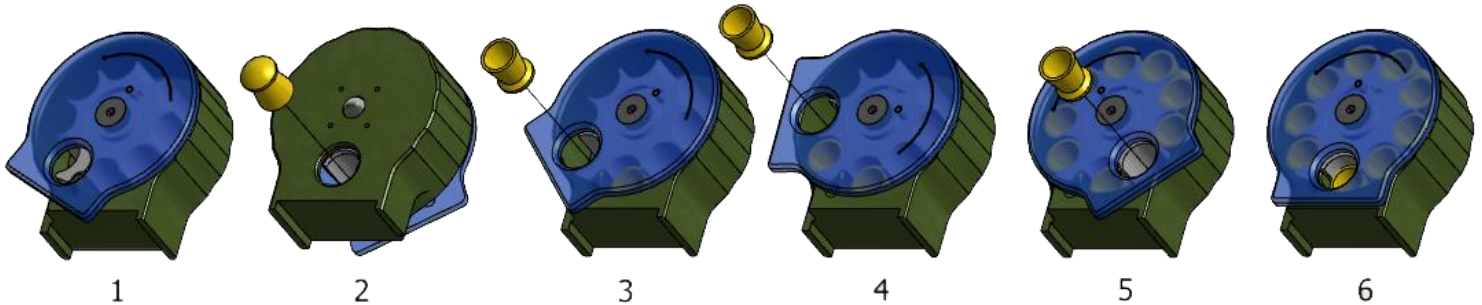
THE MAGAZINE

⚠ Use only appropriate ammunition for the caliber and barrel type.

- 18 Ball detent
- 19 Direction arrow
- 20 Cover plate
- 21 Cover plate screw




LOADING THE MAGAZINE



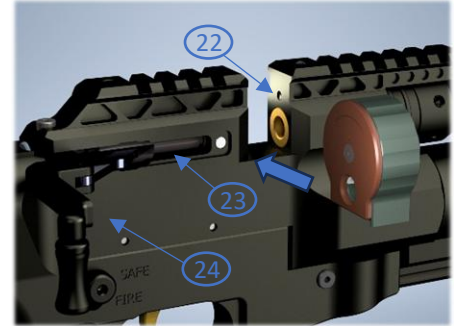
1. Wind cover plate counterclockwise in the direction of the arrow until it stops
2. Flip magazine over, holding the cover plate in position 1, insert the first pellet nose up
3. Flip magazine over, index the cover plate clockwise on pellet location, insert pellet nose down
4. Index cover plate clockwise to the next location, insert pellet nose down
5. Continue indexing cover plate and inserting pellets until the last location is filled
6. Complete the loading process by rotating the cover plate clockwise to its final position

INSERTING THE MAGAZINE






1. Engage the safety to the SAFE position
2. Cock the side lever all the way to the rear
3. Insert magazine with cover plate to the rear ensuring the magazine's index ball is aligned with the socket.
4. Close side lever completely. A pellet will now be loaded and ready to fire

 The magazine can be inserted from either the left or right side of the air gun.

- 22. Index ball socket
- 23. Bolt
- 24. Side lever



GENERAL OPERATION AND PRECAUTIONS

-  Safety Mechanism - EVOL's ambidextrous safety is designed to block both the trigger and the sear to prevent unintentional firing, this only works if you use the safety throughout your shooting regime.
-  Single Feed - EVOL can be operated with or without the magazine. Single feeding can be aided with the optional single shot tray.
-  Magazine feed - Using the magazine is simple and reliable. Always use complete and smooth strokes of the cocking lever; partial strokes can lead to jams or double feeding. The cocking lever cannot be closed after the last round has been discharged, this is an indication the magazine is empty.
-  Dry firing – There are two types of dry firing. Dry firing with adequate air in the reservoir (over 1,000psi) will not damage the gun and can be used for trigger practice, function testing, etc. Dry firing on an empty reservoir or below 1,000ps is not recommend and can lead to valve damage. Continuous dry firing on an empty reservoir will void the warranty.
-  Pellets can be inadvertently left in the bore. Opening the bolt and/or removing the magazine does not ensure an unloaded condition. If the last cambered pellet was not discharged it will remain in the bore. Always fire the air gun in a safe direction to confirm it is completely unloaded.

ADJUSTMENT

⚠ hps tuning is very different from other air guns!

⚠ Always verify the air gun is unloaded and there are no pellets in the bore before adjusting!

HAMMER

⚠ Only adjust when de-cocked.

🔧 Small flat screwdriver.

The hammer is set and forget for most applications. To reset to the factory setting, turn the adjuster wheel counterclockwise when viewed from the rear until you feel the wheel come to an abrupt stop. This is the point where the hammer is now touching the valve stem. Back up the wheel five clicks clockwise.



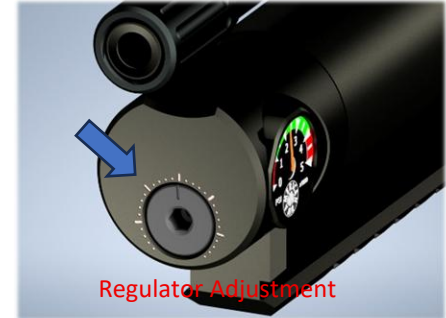
REGULATOR

⚠ Special care must be exercised when reducing the regulator set point.

🔑 3/16 hex wrench.

📄 Center indication of the adjuster knob is approximately 2,000 psi for most models.

📄 Adjuster wheel is rotationally limited to 120° each direction. Do not force.



INCREASING SET POINT

Turn adjuster wheel slowly counterclockwise until the target pressure is reached on the plenum gauge ()

📄 When increasing the pressure, adjust small in increments, then shoot several pellets and check the result on the plenum gauge. Repeat until the target is reached.

DECREASING SET POINT

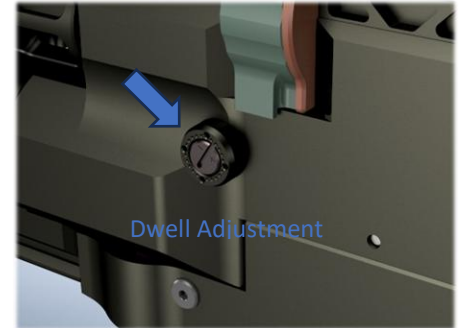
⚠ Improper procedures will damage the regulator internals. This type of damage is not covered by warranty.

1. Reduce the reservoir pressure to a minimum of 200psi below the target set point.
2. Turn the adjuster wheel clockwise no more the two increments.
3. Refill the reservoir and check the plenum gage for desired pressure.
4. If the set-point is lower than the target, repeat steps 1 through 3.



Valve Dwell


- 🔧 Small blade screwdriver or coin.
- 📄 Do not backout the dwell control past where the O-ring becomes visible.
- 📄 The valve dwell is best used as a micro velocity adjustment. Clockwise will increase power by delaying the valve closing, allowing more air to pass through the valve. Counterclockwise decreases the power.
- 📄 If the dwell control fails to increase power when turning clockwise, this is an indication that the regulator set-point must be increased to support the requested power.



TRIGGER


- ⚠️ Improper adjustment of the trigger can create an unsafe condition with the potential to render the safety nonfunctional. It is recommended that you leave trigger adjustments to your dealer or reputable gunsmith.
- 📄 More information can be found at <https://americanairarms.com/wp-content/uploads/2022/06/EVOL-Trigger-Adjustment.pdf>


MAINTENANCE


 High humidity and/or salty environments require extra care to prevent corrosion of steel parts.

BARREL CLEANING

A regular schedule will keep barrel cleaning fast and easy, wait too long and the job becomes much more difficult. A pull through system using a lead remover is best. Recommended intervals are 200-1000 rounds with pellets and 100 rounds with slugs. Lead composition and cleanliness will have a large impact on how often cleaning is necessary.


 Barrel may be removed to ease access for cleaning.

 Do not over clean. Stop when patches are no longer black and there are no visible lead shavings.

 Shooters Choice lead remover is recommended.

EXTERIOR CLEANING

Wipe exterior surfaces with an aerosol gun oil and a micro-fiber cloth. All finishes and parts are Remoil safe.

 Remoil is recommended.

Problem	Possible Fault	Remedy
Poor accuracy	Incorrect ammunition Dirty barrel Inappropriate adjustments	Consult with dealer Clean per maintenance section Return to factory settings
Nonfunctional safety	Improper trigger adjustment	Return to factory settings Contact service or qualified repair
Magazine not indexing	Improper ammunition Dirty mechanism	Consult with dealer Disassemble and clean Contact service or qualified repair
Regulator pressure rises over time	Leaky O-Rings or damaged seat	Contact service or qualified repair
Inconsistent shot velocity	Incompatible regulator, hammer, dwell settings Dirty hammer bore, spring guide, spring adjuster	Return to factory settings Contact service or qualified repair
Air escaping from barrel when filling	Valve in open position	Use breech plug to seat valve



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