

# AEA

PRECISION AIRGUNS

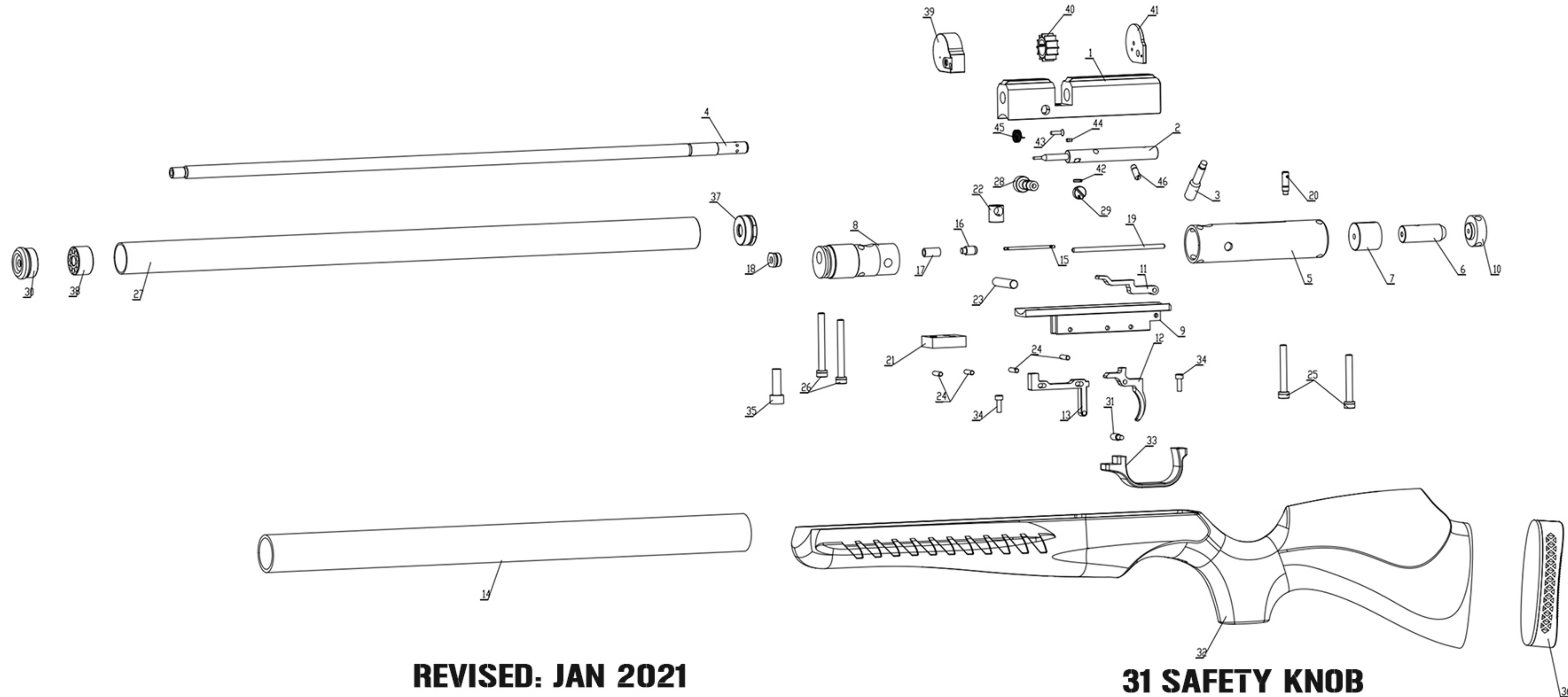
## AEA CHALLENGER SERIES USER'S MANUAL



[WWW.AEAIRGUN.COM](http://WWW.AEAIRGUN.COM)

# DRAWING, PART LIST AND SPECIFICATIONS

## CHALLENGER STANDARD DRAWING AND PART LIST



REVISED: JAN 2021

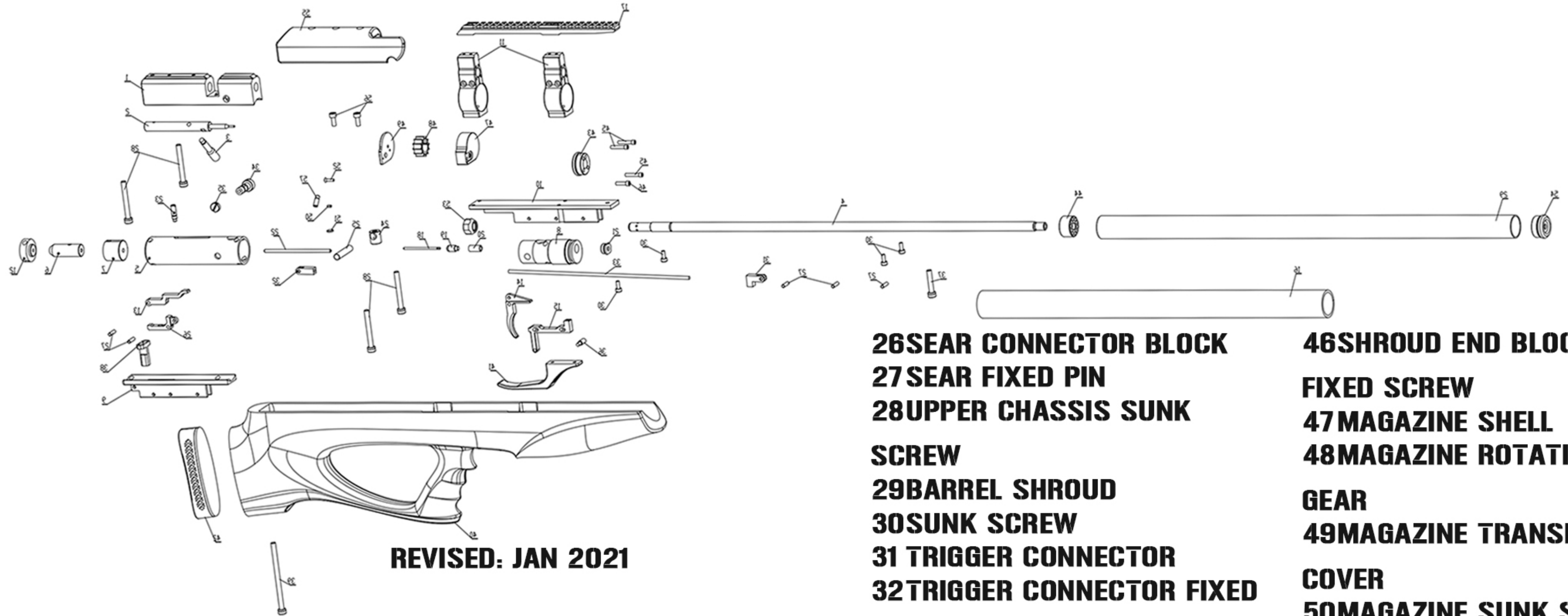
- 1 CHASSIS
- 2 BOLT
- 3 BOLT LEVER
- 4 BARREL
- 5 HAMMER HOUSING
- 6 HAMMER SLIDE
- 7 HAMMER
- 8 VALVE
- 9 TRIGGER FRAME
- 10 HAMMER SPRING END BLOCK
- 11 SEAR
- 12 TRIGGER
- 13 SAFETY
- 14 AIR TUBE
- 15 VALVE PIN

- 16 VALVE SEALED BLOCK
- 17 VALVE SPRING
- 18 VALVE SPRING END CAPE
- 19 HAMMER GUIDING PIN
- 20 HAMMER AND BOLT CONNECTOR
- 21 STOCK FIXING BLOCK
- 22 AIR GUIDING CYLINDER
- 23 VALVE FIXING PIN
- 24 TRIGGER SET FIXING PIN
- 25 UPPER CHASSIS FIXING SCREW
- 26 UPPER CHASSIS FIXING SCREW
- 27 BARREL SHROUD
- 28 POWER ADJUSTING KNOB
- 29 POWER ADJUSTING KNOB LOCK SCREW
- 30 SHROUD END CAPE

- 31 SAFETY KNOB
- 32 STOCK
- 33 TRIGGER GUARDE FRAME
- 34 TRIGGER GUARDE FRAME SUNK SCREW
- 35 STOCK SUNK SCREW
- 36 STOCK SHOULDER PAD
- 37 SHROUD END BLOCK
- 38 BARREL AND SHROUD FIXED-RING
- 39 MAGAZINE SHELL
- 40 MAGAZINE ROTATING GEAR
- 41 MAGAZINE TRANSPARENT COVER
- 42 MAGAZINE SUNK SCREW
- 43 MAGAZINE TRANSPARENT COVER FIXING SCREW
- 44 MAGAZINE GEAR CONNECTOR
- 45 MAGAZINE SPRING
- 46 BOLT CONNECTOR

# DRAWING, PART LIST AND SPECIFICATIONS

## CHALLENGER BULLPUP DRAWING AND PART LIST



- 1 CHASSIS
- 2 BOLT
- 3 BOLT LEVER
- 4 BARREL
- 5 HAMMER HOUSING
- 6 HAMMER SLIDE
- 7 HAMMER
- 8 SEAR
- 9 SEAR FRAME
- 10 TRIGGER FRAME
- 11 SHROUD AND BARREL FIXED RING
- 12 HAMMER SPRING END BLOCK
- 13 SEAR
- 14 TRIGGER
- 15 SAFETY

- 16 AIR TUBE
- 17 PICATINNY RAIL
- 18 VALVE PIN
- 19 VALVE SEALED BLOCK
- 20 VALVE SPRING
- 21 VALVE SPRING END BLOCK
- 22 HAMMER GUIDE PIN
- 23 HAMMER AND BOLT CONNECTOR
- 24 AIR GUIDING CYLINDER
- 25 VALVE FIXED PIN
- 26 SEAR CONNECTOR BLOCK
- 27 SEAR FIXED PIN
- 28 UPPER CHASSIS SUNK SCREW
- 29 BARREL SHROUD
- 30 SUNK SCREW

- 26 SEAR CONNECTOR BLOCK
- 27 SEAR FIXED PIN
- 28 UPPER CHASSIS SUNK SCREW
- 29 BARREL SHROUD
- 30 SUNK SCREW
- 31 TRIGGER CONNECTOR
- 32 TRIGGER CONNECTOR FIXED BLOCK
- 33 TRIGGER CONNECTOR ROD
- 34 POWER ADJUSTING KNOB
- 35 POWER ADJUSTING LOCK SCREW
- 36 SAFETY KNOB
- 37 STOCK FIXED SUNK SCREW
- 38 STOCK FIXED BLOCK
- 39 STOCK FIXED SUNK SCREW
- 40 STOCK
- 41 TRIGGER GUARDE FRAME
- 42 STOCK SHOULDER PAD
- 43 SHROUD END BLOCK
- 44 SHROUD FIXED RING

- 46 SHROUD END BLOCK
- 47 MAGAZINE SHELL
- 48 MAGAZINE ROTATING GEAR
- 49 MAGAZINE TRANSPARENT COVER
- 50 MAGAZINE SUNK SCREW
- 51 MAGAZINE SUNK SCREW
- 52 MAGAZINE TRANSPARENT COVER FIXING SCREW
- 53 BARREL FIXED RING
- 54 SHROUD END CAPE
- 55 CHEEK PAD
- 56 CHEEK PAD FIXED SCREW
- 57 BOLT CONNECTOR

# SPECIFICATIONS

## CHALLENGER STANDARD



Caliber	.22 Cal
	.25 Cal
	.30 Cal
	.35 cal
Weight	6.9 LBS
Barrel Length	24 Inches
Overall Length	45 Inches
Integral Shroud	
Cocking System	Side Bolt Lever
Magazine Capacity	.22 Cal 12 shots
	.25 Cal 10 shots
	.30 Cal 9 shots
	.35 cal 8
Air Tube Capacity	300 CC
Max Safe Air Filling Pressure	3600 PSI
Muzzle Velocity	.22 Cal 1400FPS 14.3 GR / .22 Cal 1200FPS 18.13 GR
	.22 Cal 1050FPS 25 GR / .22 Cal 950 FPS 33.5 GR
	.25 Cal 1100FPS 25 GR / .25 Cal 1000FPS 33.5 GR
	.30 Cal 1050FPS 45 GR / .30 Cal 950 FPS 50 GR
	.35 cal 950 fps (from 250bar) 1000fps(300bar)/79 GR
Muzzle Energy	.22 Cal 70 ft/lbs (90 Joules)
	.25 Cal 80 ft/lbs (105 Joules)
	.30 Cal 100 ft/lbs (135 Joules)
	.35 cal 160fpe(220J)/175fpe(235J)
Power Adjustment	Available
Optics	11 mm Dovetail Scope Mount
Photographs, drawings, descriptions, and other information are purely indicative. AEA Precision Airguns Inc reserves the right to change, modify, or discontinue products or features at any time.	

## CHALLENGER BULLPUP



Caliber	.22 Cal
	.25 Cal
	.30 Cal
	.35 cal
Weight	7.5 LBS
Barrel Length	24 Inches
Overall Length	35 Inches
Integral Shroud	
Cocking System	Side Bolt Lever
Magazine Capacity	.22 Cal 12 shots
	.25 Cal 10 shots
	.30 Cal 9 shots
	.35 cal 8
Air Tube Capacity	300 CC
Max Safe Air Filling Pressure	3600 PSI
Muzzle Velocity	.22 Cal 1400FPS 14.3 GR / .22 Cal 1200FPS 18.13 GR
	.22 Cal 1050FPS 25 GR / .22 Cal 950 FPS 33.5 GR
	.25 Cal 1100FPS 25 GR / .25 Cal 1000FPS 33.5 GR
	.30 Cal 1050FPS 45 GR / .30 Cal 950 FPS 50 GR
	.35 cal 950 fps (from 250bar) 1000fps(300bar)/79 GR
Muzzle Energy	.22 Cal 70 ft/lbs (90 Joules)
	.25 Cal 80 ft/lbs (105 Joules)
	.30 Cal 100 ft/lbs (135 Joules)
	.35 cal 160fpe(220J)/175fpe(235J)
Power Adjustment	Available
Optics	Pica-tinny Rail Scope Mount
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# SPECIFICATIONS

## CHALLENGER STANDARD BIGBORE



Caliber	.35 Cal
	.50 Cal
Weight	.35 Cal 7.4 LBS
	.50 Cal 7.9 LBS
Barrel Length	24 Inches
Overall Length	48 Inches
Integral Shroud	
Cocking System	.35 Cal Side Bolt Lever/ .50 Cal Side lever Action
Magazine Capacity	.35 Cal 10 shots
	.50 Cal 6 shots
Air Tube Capacity	500 CC
Max Safe Air Filling Pressure	3600 PSI
Muzzle Velocity	.35 Cal 1050 FPS 82 GR
	.50 Cal 900 FPS 225 GR
Muzzle Energy	.35 Cal 200 ft/lbs (265 Joules)
	.50 Cal 400 ft/lbs (550 Joules)
Optics	11 mm Dovetail Scope Mount
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## CHALLENGER BULLPUP BIGBORE



Caliber	.35 Cal
	.50 Cal
Weight	.35 Cal 8.1 LBS
	.50 Cal 8.6 LBS
Barrel Length	24 Inches
Overall Length	38 Inches
Integral Shroud	
Cocking System	.35 Cal Side Bolt Lever/ .50 Cal Side lever Action
Magazine Capacity	.35 Cal 10 shots
	.50 Cal 6 shots
Air Tube Capacity	500 CC
Max Safe Air Filling Pressure	3600 PSI
Muzzle Velocity	.35 Cal 1050 FPS 82 GR
	.50 Cal 900 FPS 225 GR
Muzzle Energy	.35 Cal 200 ft/lbs (265 Joules)
	.50 Cal 400 ft/lbs (550 Joules)
Optics	Pica-tinny Rail Scope Mount
Photographs, drawings, descriptions, and other information are purely indicative. AEA Precision Airguns Inc reserves the right to change, modify, or discontinue products or features at any time.	

**READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING AND AIR FILLING THESE AIRGUNS.  
POINTED IN A SAFE DIRECTION ALL THE TIME AND MAKE SURE THE AIR RIFLE IS UNLOADED**

# **WARNING**

## **READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING AEA PRODUCTS**

**This air rifle is not a toy and carelessness use may result in serious injury or accidental death.**

**This airgun is recommended for adult use or under adult supervision.**

**Never attempt to disassemble this rifle without manufacturer authority.**

**Never fire the rifle when it is out of air or when air cylinder is removed!**

**Use lead pellets only, The use of any projectile other than a lead pellet is unauthorized and will void the manufacturers warranty.**

**AEA Airguns are designed for Use with dry-filtered, compressed air to fill the air cylinder.**

**NEVER use other gases such as oxygen, acetylene, hydrogen, etc.**

**Never fill this air rifle air cylinder above 250 BAR /3600 PSI (working pressure) unless stated for the specific model.**

**The resulting damage caused by overcharging the air cylinder is not covered by the manufacturers warranty.**

**Always wear eye and ear protection when using an airgun.**

**Always point the air rifle in a safe direction and be aware of the backstop.**

**Never point an air rifle at anything you do not intend to shoot.**

**Always make sure that each pellet you use is in the proper caliber for the air gun and never re-use pellets.**

**Never leave the air gun loaded if it is not going to be used.**

**Keep your fingers away from the trigger and do not load the rifle until you are ready to fire.**

**Anytime you transport an airgun, make sure the safety is on and the gun is unloaded.**

**Store the airgun (unloaded) and ammunition in separate, safe places, out of reach of children.**

**Users should follow all local laws regarding air gun ownership and use..**

**We recommended that you have the air cylinder visually inspected every 3 years.**

**FAILURE TO OBSERVE THE ABOVE WARNINGS CAN RESULTING DAMAGE TO YOUR AIR RIFLE, ACCIDENTAL DEATH OR SERIOUS INJURY. PRACTINCE GUN**

**SAFETY AND RESPONSIBILITY**

# WOODEN STOCK ASSEMBLE

Take out the wooden stock and screws, Insert the action into the wood stock then install the provided screws.

**Notice: Due to the soft wood material, DO NOT OVER TIGHTEN THE SCREW. It will result in safety or cocking issues.**

## AIR FILLING

1. Pull out the end cape on the air cylinder.

2. Insert 7mm air fill probe into your air filling devices (such as high pressure air compressor, scuba air tanks, hand pump or recharging station) hose connector.

**Notice: Before filling, secure that devices hose and the fill probe connecting tightly.**

3. Insert the 7mm fill probe into the cylinder's air filling hole.

4. Close the bleed screw on your recharging devices, open the recharging devices valve very slowly. When recharging you must watch the gauge carefully. Never exceed 250 bar / 3600 psi (unless the model allows it). When the air fill is complete, close the recharging devices valves. To disconnect the cylinder from the air filling devices, open the bleed screw. This allows high pressure air inside the refill clamp to exhaust, making it possible to pull out the 7mm fill probe from air filling hole.

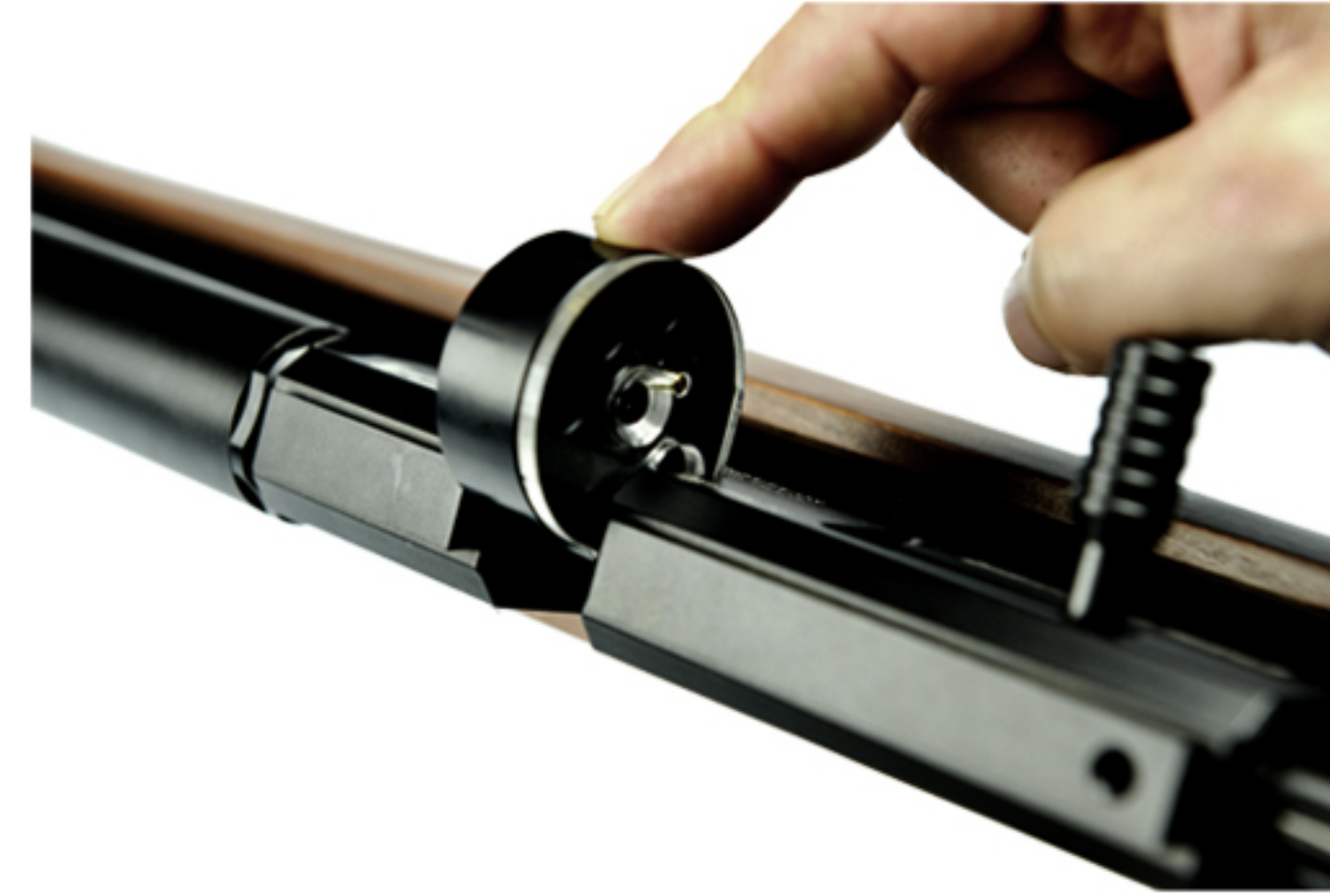
5. After finish air filling put on the end cape prevent dusts from entering the air filling hole.

**Warning: AEA Airguns are designed for Use with dry-filtered, compressed air only. Never use other gases such as oxygen, acetylene, hydrogen, etc. Never fill the air cylinder above 250 BAR /3600 psi unless model specified. The resulting damage caused by overcharging the air cylinder or air tank is not covered by the manufacturer's warranty.**



# LOADING PELLETS & MAGAZINE

**Spring Tension Magazine Removal**  
Pull the cocking lever and cocking keep the bolt lever on the rear position. Remove the magazine from the slot then hold the bolt lever and pull the trigger while holding the cocking lever in order to de cock the hammer.



Load pellets by pushing the transparent cover **counter clockwise** until the cover stops. Keep the cover open in the end position.

Put one pellet in the open slot from the opposite end of the magazine, the head of the pellet shall be pointing out of the hole.

The back of the pellet should now be seen through the transparent cover.

This pellet will lock magazine spring.

Now turn the magazine so that the transparent cover is facing you.

Turn the cover clockwise one slot at the time and fill in remaining pellets from the transparent cover. Lock the transparent cover at starting position.

**WARNING**  
Lead pellets shoot only. The use of any projectile other than a lead pellet is unauthorized and will void the manufacturer's warranty.  
Always make sure that each pellet you use is the proper caliber for the airgun and never re-use pellets. Rotate the magazine's cover in counter clockwise direction. Don't rotate in the wrong direction or you will damage the magazine's spring tension. User abuse will void manufacturer's warranty automatically.



## LOADING THE MAGAZINE

Pull the cocking lever to its rear position.

Insert the full loaded magazine into the slot.

**POINTED IN A SAFE DIRECTION ALL THE TIME AND MAKE SURE**

**THE AIR RIFLE IS UNLOADED**

**Pointed in a safe direction all the time**

## **WARNING**

**IF YOU WERE NOT INTEND TO SHOOT HOLD THE BOLT LEVER AND PULL THE TRIGGER SLOWLY IN ORDER TO DE COCK THE HAMMER.**

**POINTED IN A SAFE DIRECTION ALL THE TIME AND MAKE SURE THE AIR RIFLE IS UNLOADED**



# COCKING, DISCHARGING, LOADING AND FIRING

Before loading the airgun secure the safety is in the On Safe position and the muzzle is pointed in a safe direction all the time. Manually move the safety to the on safe position by switching safety lever back toward trigger.

To cock the air rifle, pull the bolt lever until the bolt is held in the cocked position. After cocking, push the cocking lever forward in order to push the pellets into the chamber, then rotate the bolt lever into lock position.

To fire, take your target, aim, switch the safety to the fire position and squeeze the trigger until the air rifle discharges. To de cock the hammer, pull and hold bolt lever, remove the magazine from the slot, squeeze the trigger slowly to decock the hammer spring while holding the cocking handle.

**WARNING:** Do not move the safety to the Fire position unless the air gun is pointed in a safe direction. Practice safe and responsible gun handling practices. After de cocking the hammer, always to dry fire the air rifle in a safe direction to ensure the breech is clear.



DECREASING



## POWER ADJUSTMENT

Power can be adjusted with the power adjusting wheel. Find you an allen key matching the lock screw and unscrew the power adjustment wheel. (hold one side lock nut tightly and rotate another side adjustment wheel ) Max power is at 12 o clock position, turning the knob either to the left or right will lower the power with 9 o clock and 3 o clock positions being fully closed (min power)

**Notice:** After adjusting, lock the power adjustment lock nuts, do not over tighten.

## **WARNING**

After discharge the hammer, there is one projectile existing in the barrel chamber probably.

Do not move the safety to the On Fire position unless the air gun is pointed in a safe direction. Safe means that if the gun discharged it would not cause injury or property damage. Mechanical safeties are not infallible and do not replace the need for responsible gun handling practices.

## OPERATIONAL NOTICES

**Modification, Removing or disassembling the safety mechanism**

**Modification, disassembling or removing any of the safety parts can disable the rifle and will void the warranty and will create a hazardous condition.**

### MODIFICATIONS TO THE VALVE

**The valve in the air rifle is not a user-maintainable item. Any attempt to remove or modify the valve in any way will void the warranty and may create a hazardous condition. Filling the air tank with a gas other than dry compressed air is not recommended and will void the warranty.**

### CLEANING THE BARREL

**An airgun barrel needs standard maintenance. If you do clean the barrel, use a good quality bore brush of the correct size, and use a non-jointed cleaning rod if possible. Do not use cleaning solvents and agents formulated for firearms because they can damage the seals and O-rings, use silicon cleaning lubricants and cleaning products.**

### **WARNING**

**This rifle should only be disassembled by factory-authorized technician and a factory-authorized repair station, or you will void manufacturer warranty automatically including any modification or tuning as well.**

### MAINTENANCE OF THE AIR CYLINDER

**AEA Airguns' air cylinder is made of 7075 aluminium alloy. The air cylinders are designed for Use with dry-filtered, compressed air to fill the air cylinder. Never use other gases such as oxygen, acetylene, hydrogen, etc. Never fill the air cylinder above 300 BAR /4350psi. The resulting damage caused by overcharging the air cylinder is not covered by the manufacturer's warranty.**

### SHOOTING SAFETY

**Never point the muzzle of the rifle at anything you do not intend to shoot. Practice gun safety and responsible gun ownership.**

**Always wear safety glasses when shooting or operating an air rifle, safety first! Avoid shooting targets that will make the pellet ricochet.**

#### **Warranty Information**

**All AEA Airguns carry ONE YEAR Manufacturer Warranty against faulty workmanship and defective materials. The Manufacturer Warranty will start automatically after you purchased an AEA product from the dealer. Any AEA airguns covered by this warranty will be repaired or replaced at the discretion of AEA Precision Airguns Inc, should a defect in material or workmanship be found, Contact your dealer first. If the rifle is determined to have a defect within the warranty period, contact the warranty center or authorized repair facility to arrange service. The warranty guarantee does not cover any damage caused by tampering with the air rifle or abuse. Normal wear parts such as O-rings and plastic magazines are not covered as well.**

**Repairs may only be made by the Manufacturer Warranty Center or authorized repair facility. This warranty becomes invalid for any gun that is disassembled or modified in any way not specifically authorized by AEA Precision Airguns Manufacturer. This warranty also becomes invalid for any gun that has been damaged by abuse or improper handling.**

**A ONE YEAR manufacturer's warranty applies in those instances for all AEA airguns.**

**Official Website: [www.aeaairgun.com](http://www.aeaairgun.com)**

**Email: [aeaairgun@gmail.com](mailto:aeaairgun@gmail.com)**

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# Various AEA Airguns Bring You Completely Different Experiences



**AEA**  
PRECISION AIRGUNS

**AEA PRECISION AIRGUNS INC.**

**[www.aeaairgun.com](http://www.aeaairgun.com)**

**[aeaairgun@gmail.com](mailto:aeaairgun@gmail.com)**