



### Package contents

MaxFlow HPA Low-Pressure Regulator, two destructive stickers, two Allen keys, replacement piston o-ring, long pressure setting screw, instructions manual.

### General information

The MaxFlow HPA LP regulator can be used with any standard paintball HPA tank. The recommended input for the MaxFlow regulator (or the tank regulator output pressure) is 850 PSI. The regulator can work even with lower input pressure, but full and correct operation cannot be guaranteed. **Do not use input pressure higher than 900 PSI.**

### Installation on an HPA tank

Make sure the pressure setting screw is loose before installing MaxFlow on your HPA tank. It should be screwed in to the same level as or protruding above the regulator head. The regulator is delivered with the pressure setting screw loosened, i.e. ready to be installed on your HPA tank. Tighten the regulator clockwise until it is fully screwed onto the tank. The O-ring on the tank fits tightly around the whole circumference and it is not necessary to tighten the regulator with great force.

### On/Off and pressure adjustment

The on/off and the pressure setting function is performed using an Allen screw located in the head of the regulator. By slowly screwing the Allen screw clockwise, the tank is opened and then the output pressure of the MaxFlow LP regulator starts to increase gradually. Tighten the screw until the desired pressure is reached. To reduce the regulator output pressure or to turn the regulator off, turn the setting screw counterclockwise – however, the pressure in the regulator will not drop until the higher pressure that is already inside the regulator chamber is released. This can be achieved, for example, by disconnecting and reconnecting the hose.

The setting screw can be secured with a smaller Allen screw placed sideways in the groove of the regulator's head. It is necessary to loosen the small locking Allen screw before it is possible to set the pressure again. Never tighten the locking screw with great force as this may damage the thread of the setting screw.

The regulator operates in the output pressure range of 0–225 PSI. After you turn the regulator off or close the HPA tank, you can release the pressure inside the regulator chamber by simply inserting an Allen key into the QD coupler and pressing the check valve.

### Removal of the regulator from the HPA tank and reinstallation

The regulator can also be removed from the tank without switching off and releasing the pressure. Pressure leakage from the regulator occurs when the HPA tank O-ring stops sealing. There is no risk of damage to the O-ring of the HPA tank when using MaxFlow..

If the regulator is removed from the tank without switching off, the setting screw must be loosened before installation onto **a different** tank. Various tanks have various outlets, pin heights, and pin shapes. Therefore the MaxFlow output pressure may vary.

There is no need to loosen the setting screw when reinstalling the regulator onto the **same** HPA tank where MaxFlow was set to the desired pressure and then removed. Once reinstalled, MaxFlow will have the same previously set pressure.

### Safety valve

MaxFlow is equipped with an adjustable safety valve. To adjust it, unscrew the cover stainless steel counter nut counterclockwise. There is a setting screw for size 4 allen key under the counter nut. Turning the screw clockwise

increases the pressure limit at which the safety valve starts releasing the pressure. Turning the screw anti-clockwise reduces the set pressure of the safety valve.

**IMPORTANT: Only manipulate the safety valve when the MaxFlow LP regulator is removed from the tank! The setting screw must never exceed the edge of the cover nut!**

### Tournament lock

Once the desired pressure has been set, the regulator can be locked to prevent the change in the output pressure settings. MaxFlow allows several ways of locking to be used.

**1) Destructive sticker** with a unique number. This sticker can be used to seal the hole containing the setting screw, making it impossible to manipulate the setting screw without destroying the sticker. The event organizer will only note down the unique number of the sticker corresponding to the unique player. Destructive stickers are included in the package. Replacement destructive stickers can be purchased from our online store or from our partners.

**2) Plastic cable ties.** After locking the adjusting screw with a small Allen screw in the groove of the regulator's head, the locking Allen screw can be covered with a plastic cable tie, which is commonly used by the event organizers. Without cutting the tie, the locking Allen screw cannot be loosened and the pressure setting cannot be changed using the large setting screw.

**3) Standard Tournament Lock.** The cap which is put on the head of the regulator and secured against removal by plastic cable ties. These caps can be printed on a 3D printer and the print file is available at our online store free of charge.

### Maintenance of Max Flow LPR

**The regulator must be removed from the HPA tank before maintenance!**

- 1) To disassemble the regulator: First, completely loosen and remove two opposite securing Allen screws from the lower part of the regulator's head. Then unscrew the regulator's head upwards.
- 2) Turn the regulator upside down – 10 disc springs and a flat, stainless steel washer fall out.
- 3) Push the piston out of the regulator body from the HPA tank side.
- 4) Clean the inside of the regulator body with a cloth\* and remove any dirt.
- 5) Remove the O-ring from the piston using a blunt tool (e.g. using a flat-blade screwdriver) and clean it.
- 6) Wipe the disc springs and the washer clean.
- 7) Lubricate the inside surface of the regulator body, which is in contact with the o-ring, with a thin film\*\* all the way to the inner edge at the regulator outputs' level.
- 8) Mount the piston o-ring back on the piston and lubricate around the circumference. Insert the lubricated piston into the regulator body and slide it in. When sliding the piston in, it is most likely to jam and not hit the center hole. Use a small Allen key to align it (turn the regulator upside down).
- 9) Put 5 pairs (10 pieces) of disc springs on a large Allen key according to the diagram. Insert the springs assembled in this way into the regulator body and remove the key. Then place the last straight stainless steel washer on the springs.

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- 10) Screw the head into the “*Assembly check*” position on the regulator body and secure it with two Allen screws.
- 11) Push the piston from the HPA tank side. It should partially slide back and compress the disc springs.

\*The cloth can be moistened with alcohol.

\*\*We recommend “TechT Gun Sav” or silicone-based lubricants. **WD-40 and similar lubricants, which can damage the gasket, are not suitable!**

### IMPORTANT NOTICE

- **Never** disassemble the regulator while it is mounted on the tank / under pressure!
- **Never** fully remove the safety valve setting screw while the regulator is mounted on the tank / under pressure!
- Do **NOT** use with CO<sub>2</sub>!
- If the basic 8mm setting screw is below the regulator head level by more than 4 mm (4 turns) when set to the desired output pressure, replace it with the longer 12mm setting crew included.
- All output ports of the MaxFlow regulator can be swapped without deteriorating airflow.
- The regulator can be only used screwed directly to an HPA tank. It will not work with an external ON/OFF valve or another method of connection!
- **MaxFlow uses a unique construction and works directly with the opening pin of HPA tanks. Its flawless function depends on the condition of the HPA tank output valve – or more precisely the gasket of the tank opening pin. In case your MaxFlow does not work properly, check the condition of this gasket first.**