

# MANCRAFT

AIRSOFT ENGINEERING & MACHINING

## **PDIK V2, V3, SVD, M14 gen.1**

Pneumatic drop-in kit gen.1 is a single shot (semi) engine designed to operate with input pressure between 100 and 240 PSI (7-16 bar) using HPA (High Pressure Air) or CO2. It operates using build-in two-way gas valve and set of cylinders to deliver the same volume of gas every shot. To work properly thr pressure regulator and the HPA bottle/CO2 adaptor is required. The PDIK is fitted to Tokyo Marui and TM clone replicas. No batteries or accumulator is required.

We offer kit for:

- SVD (Tokyo Marui spring type)
- M4, M16, MP5 etc. Gearbox type V2.
- SR25 Gearbox type V2 Long.
- AK47, AK74, G36 etc. Gearbox type V3.
- M14 G&G (M14 TM not compatible)

## **Unboxing PDIK SVD**

Box contains:

- PDIK gen1 PDIK SVD conversion kit with 1.2m hose (4mm) under the foam
- 4mm hose connector
- Red assembly plate
- Two m5 montage screws
- Brass assembly for a handle recoil spring
- Mancraft patch
- Packing foam

## **Unboxing PDIK V2, V2 LONG**

Box contains:

- PDIK v2 gen1 conversion kit with 1.2m hose (6mm) attached
- m4 nut with a bushing for buffer tube (V2 LONG only)
- Mancraft patch
- Packing foam

## **Unboxing PDIK V3**

Box contains:

- PDIK v3 gen1 conversion kit with 1.2m hose (6mm) attached
- Mancraft patch
- Packing foam

## Unboxing M14 G&G

Box contains:

- PDIK m14 gen1 conversion kit with 1.2m hose (6mm) attached
- Trigger
- Mancraft patch
- Packing foam

## Preparation for installation

The PDIK is a replacement for the original AEG gearbox or parts of the gearbox. PDIK comes without trigger plate, trigger and safety lever. To lead pressure hose to the back some modifications in replica's body may be needed.

Nozzle length have to be adjusted to meet original AEG dimensions. To work properly PDIK unit have to be aligned to barrel.

To change nozzle length look at the end of this manual.

## Installation

To install a PDIK v2 unit you need to remove upper receiver, unscrew a handle, remove body pins, unscrew magazine catch and pull out AEG gearbox. If PDIK comes with gearbox you need to unscrew and open it to **install original trigger, selector plate and safety lever**. Install PDIK unit in the place of AEG. Some AEG triggers may need to be slightly modified to work properly. To use V3 your original gearbox shell modification is needed.

To use your original shell you have to send us gearbox for modification.

Put PDIK inside lower receiver, hose through grip (where electric motor gear was) and install all other components.

To check alignment you have to install upper receiver without barrel and HU chamber.

Look into the barrel and verify if the nozzle is in centric. To correct alignment put spacers between the lower receiver and gearbox shell.

To fix nozzle alignment you have to loosen the buffer tube and the grip and put spacers:

**If the nozzle is too high** put a spacer between the rear of the gearbox and lower receiver.

**If the nozzle is too low** put a spacer under the gearbox in front of the lower receiver.

**If the nozzle deviate left or right** put a spacer in-between left/right side of the lower receiver and gearbox.

Then tighten the grip and buffer tube and check the result.

PDIK v2 gen1 is designed to work properly on barrel length of 450mm and more. For a shorten barrel we provide 3D printed gas volume reducer. Please check installation guide at the end of this manual.

## Gas supply, fittings and settings

PDIK operates using high pressure gas that runs through a 6mm tube. To provide gas you need a regulator and HPA bottle tank. We recommend using our HRR High Rate Regulator for the best performance.

You can connect PDIK with regulator by:

- directly choosing the 6mm L-shape fitting on the regulator
- using quick detach (QD) fitting for 6mm hose (in EU or US standard)
- using HP line that connects QD in regulator directly to QD in replica

You can regulate the BB velocity by changing air pressure of the regulator.

PDIK gen1 works properly from 100psi (7bar) and should not be used over 250psi (16bar). Remember to check BB velocity before the game and don't exceed your field limits.

Regulator manual is available at our site: <https://shop-mancraft.com/instructions/HRR-manual.pdf>

## Tools

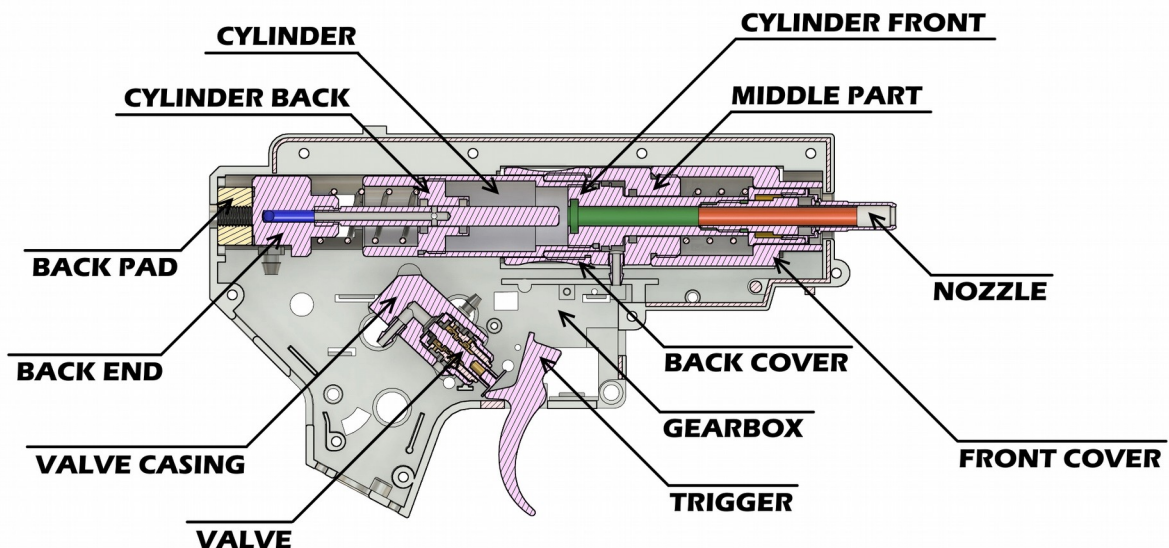
To disassemble PDIK you need:

- 2x Pliers
- size 9 flat wrench
- size 7 flat wrench

## Maintenance

To keep your conversion kit operational you have to keep it clean from dust and dirt. Water would not damage PDIK directly, but could wash out grease. Dry and lubricate your PDIK after the water exposure.

As a perfect lubricant we recommend GunSavTech grease. In case of malfunctions please contact us directly.



To take the PDIK apart (PDIK SVD, V3 and M14 works the same, shape of parts may vary):

1. Split- open the **Gearbox**
2. Take PDIK out of the **Gearbox** and pull the **Back End** out of the **Cylinder Back**. With a little stretch of the hose it should separate.
3. Unscrew the **Front Cover** (right- turn thread)
4. Use size 9 and size 7 flat wrenches to unscrew the brass part from the **Cylinder Front** (right- turn thread). Dont use pliers! The aluminium **Cylinder Front** surface have to be clean and free of scratches.
5. Separate the cylinder set from the **Middle Part**
6. Use size 9 pliers to unscrew the **Cylinder Front** from the **Cylinder** (right- turn thread). Grab the **Cylinder** with the pliers if parts are jammed.
7. Do the same separating the **Cylinder** from a **Cylinder Back**.
8. Use pliers to unscrew the **Valve** from the **Valve Case** (right- turn thread).
9. To unscrew the **Nozzle** use a pair of pliers on both aluminium parts holding it together (check the manual for setting the nozzle length at <https://shop-mancraft.com/en/content/22-extension>)

10. Put all the parts together and be careful not to scratch the vital surfaces.

Nozzle length of the PDIK V3 and PDIK SVD need to be set to the original one. To make sure nozzle is set properly take the airseal test with a complete hop-up chamber unit. It should be airsealed after the shot (when trigger is pressed) and also make a space for a BB before the shot. Be aware to always check the nozzle length with the trigger pressed. You have to be sure nozzle is fully forward.

All the rest of the parts are glued together with Loctite 542 sealant. Don't remove them.

To fix worn out hoses cut them delicately not to damage the brass fittings. When installing the new ones do not use a heat, they will fit using pliers.

### Gas reduction installation:

To install gas reduction you have to place the 3D printed part inside the Cylinder before the assembly.

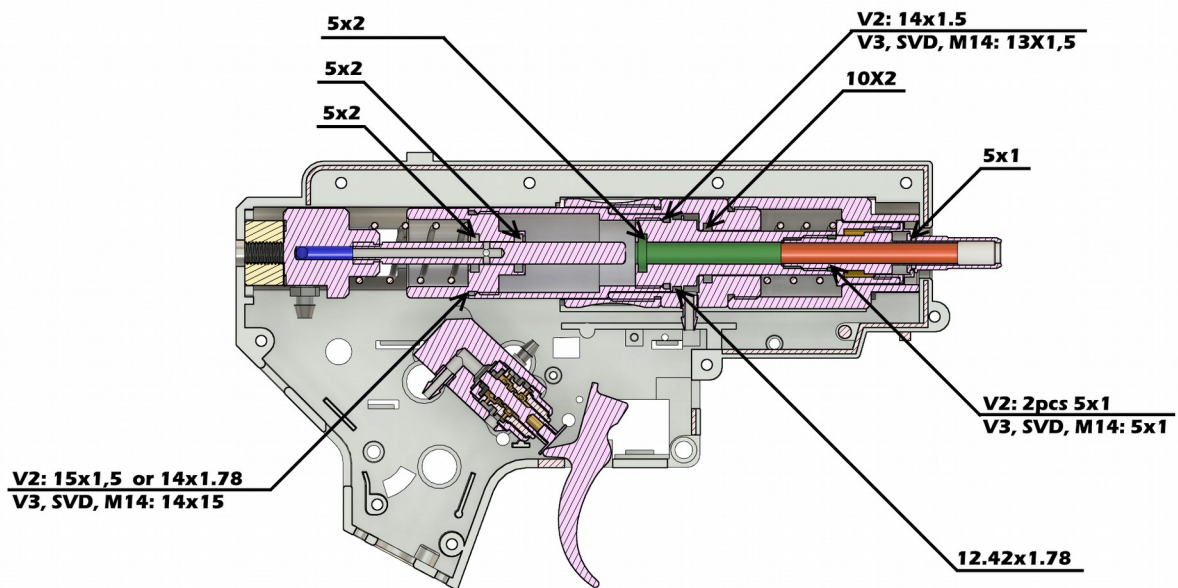
### Changing seals:

To replace seals with a new one you have to disassemble your PDIK first. Use a needle to remove the old ones. Be careful not to scratch the surfaces. Clean the grooves from old grease and dirt, use pressured air to blow out dirt from narrow places.

The most difficult to place are the 5x2 seals. Grease them a little, squeeze them and put into the grooves. Use a smooth metal rod from one side and the 4mm hose or the other tool to push it from the other.

Be careful not to twist or damage seals while placing. Make double check before assembling.

The correct seals placement:



You can purchase Seals Set for PDIK from our site: <https://shop-mancraft.com/en/pdik-parts/41-zestaw-uszczelek-pdik.html>

Mancraft Airsoft  
ul. Jana Pawła 13  
48-340 Głuchołazy  
Polska/Poland  
contact@mancraft.com

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