

# **INSTUCTION MANUAL**

**NFI-AI-200**






**ZA Medical Devices, China**

# Product Introduction

**NFI-AI-200 Needle-free and Micro-Needle Injection System** is a new solution of drug delivery for small livestock including pigs, sheep, dogs, cats, rabbits, or other pets. It enables transdermal injections of dose 2.0ml or 1.0 ml pharmaceuticals. 1.0ml nozzle is a needle-free nozzle, and 2.0ml nozzle has a tiny needle that just pieces the outlay of the animal's skin. The system is portable and battery powered.

**NFI-AI-200 Needle-free Injection System** brings in the following advantages:

-  Avoid cross-contamination of animal diseases;
-  Increase the absorption rate of drugs and vaccines;
-  Eliminate the hidden danger of the injection needle.

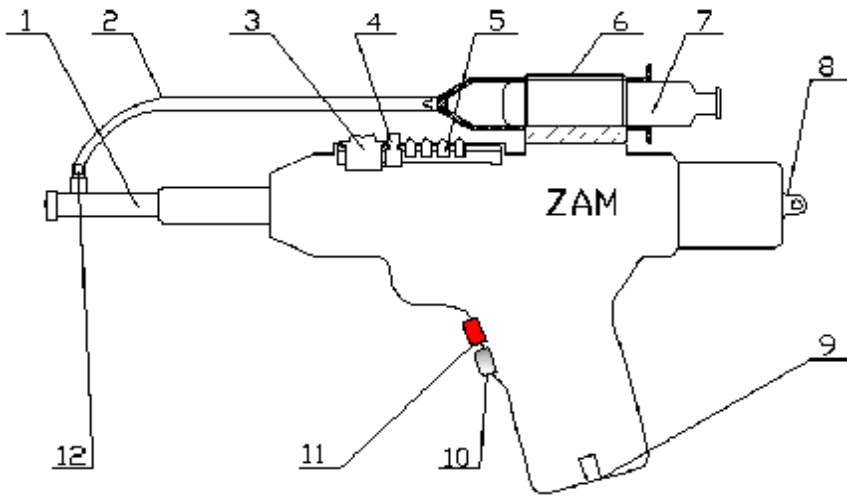
## 1. Technical Specification:

Driving power	Square coil spring
Operation Voltage/Charge Power	14VDC/220V or110VAC
Injection Dose	2.0ml/1ml
Injection Accuracy	± 0.01ml
Drug-Contact Material	Medical Silicon Rubber, Stainless Steel
Suitable Injection Objects	Pigs, Sheep, Dogs, Rabbits, Pets
Suitable Pharmaceuticals	Water-based Drugs
Total Weight	2.5kg

## 2. Package Composition:

1. Injector
2. Battery Charger
3. 50ml Syringe
4. Medical Soft Tube
5. 2ml/1ml Nozzle and Ampoule
6. Manual

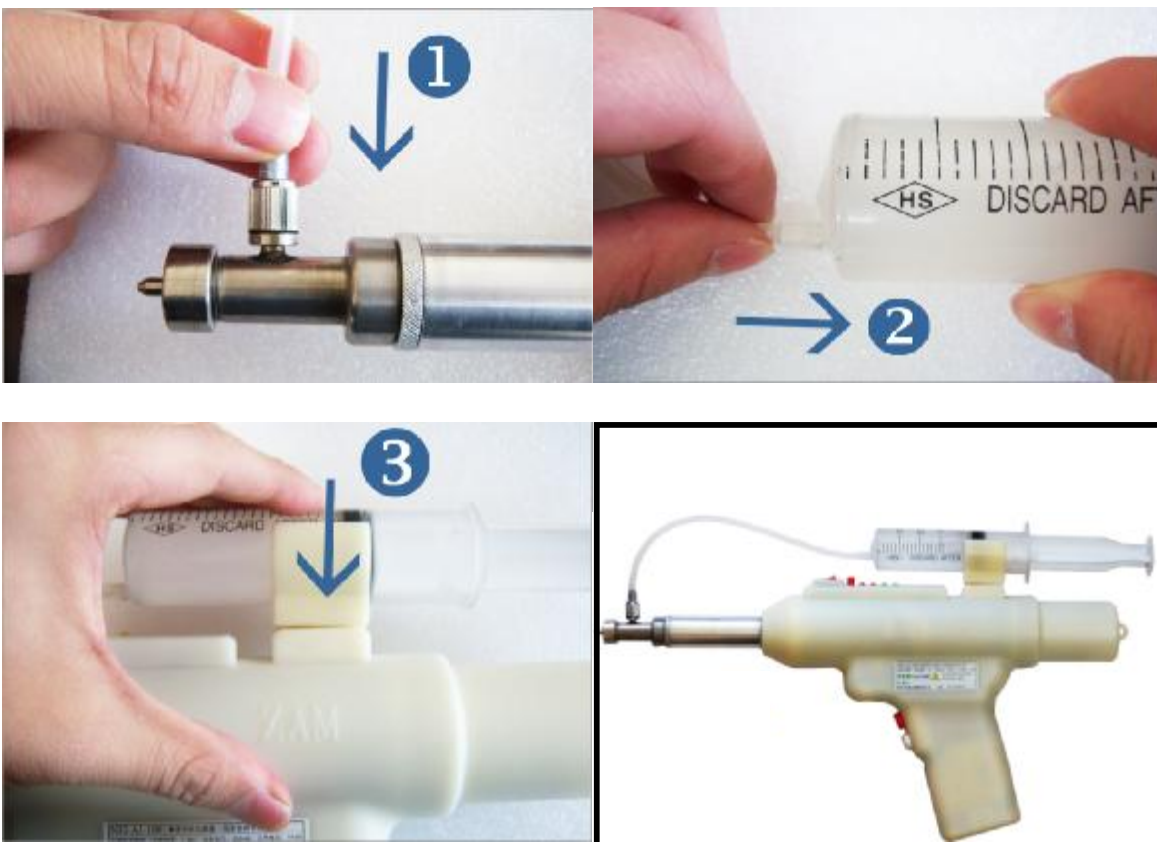
### 3.Product Components:



- |                     |                   |
|---------------------|-------------------|
| 1-Ampoule           | 2-Hose            |
| 3-Power Switch      | 4-Reset Button    |
| 5-Status Indicator  | 6-Syringes Slot   |
| 7-Syringe           | 8-Straps buckle   |
| 9-Charging port     | 10-Inhaler Button |
| 11-Injection Button | 12-Hose connector |

### 4.Operation Instruction:

#### 1<sup>st</sup> Step: Injection Preparation



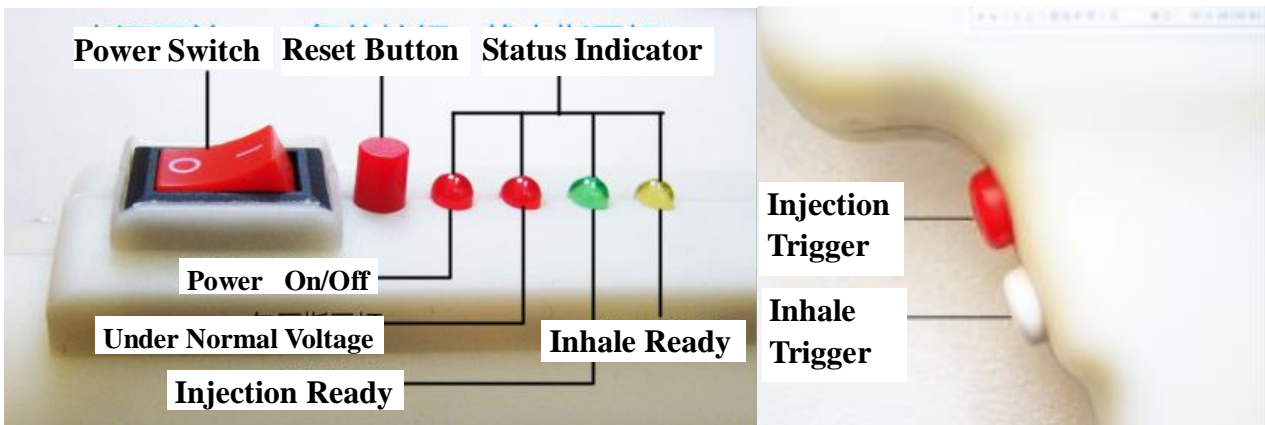
① Remove the syringe and fill the syringe with drug through conventional needle.

- ② Connect the syringe with the hose connector on top of the ampoule by a provided medical hose, and insert the syringe into the slot;
- ③ Make the injector head up, push the piston of syringe until drug comes out sustainability;

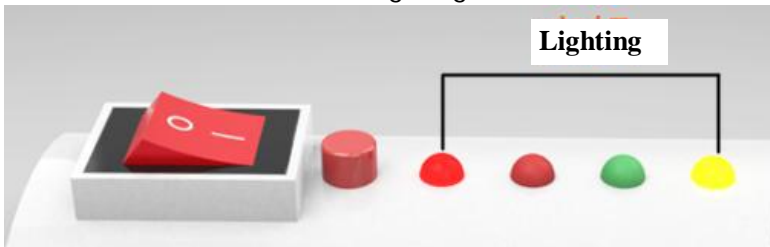


**Injection Preparation Complete**

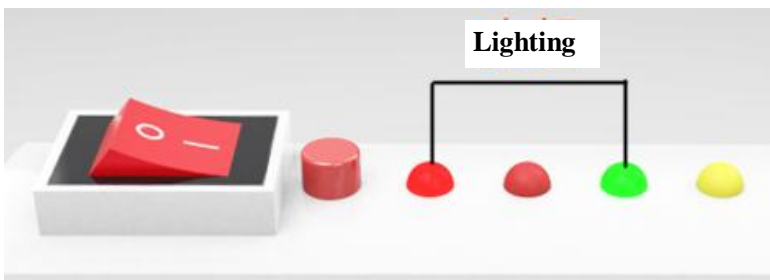
## 2<sup>nd</sup> Step: Injection



- ① Turn on the power switch by pushing ‘—’ on the button, and the “Power On” indicator and the “Inhale Ready” indicator will light, indicating its ready for the drug to flow in, as shown in the following figure:



- ② Push the white button of “Inhale Trigger”, in about 4-5 seconds, when the green indicator lights, the inhalation completes and it is ready for injection, as shown in the following figure:



**Note: Push down the “Inhale Trigger” for 1 or 2 seconds to operate, do not remove instantly.**

- ③ Push the “Injection Trigger” and finish the injection process.

### 3<sup>rd</sup> Step: Maintenances

#### I Routine Maintenance

After bulk injection, use a soft tube to connect the hose connector to clean water, and then inject several times to thoroughly clean the syringe. After you use the sticky or greasy products, use hot water and a mild detergent to wash the entire injection system.

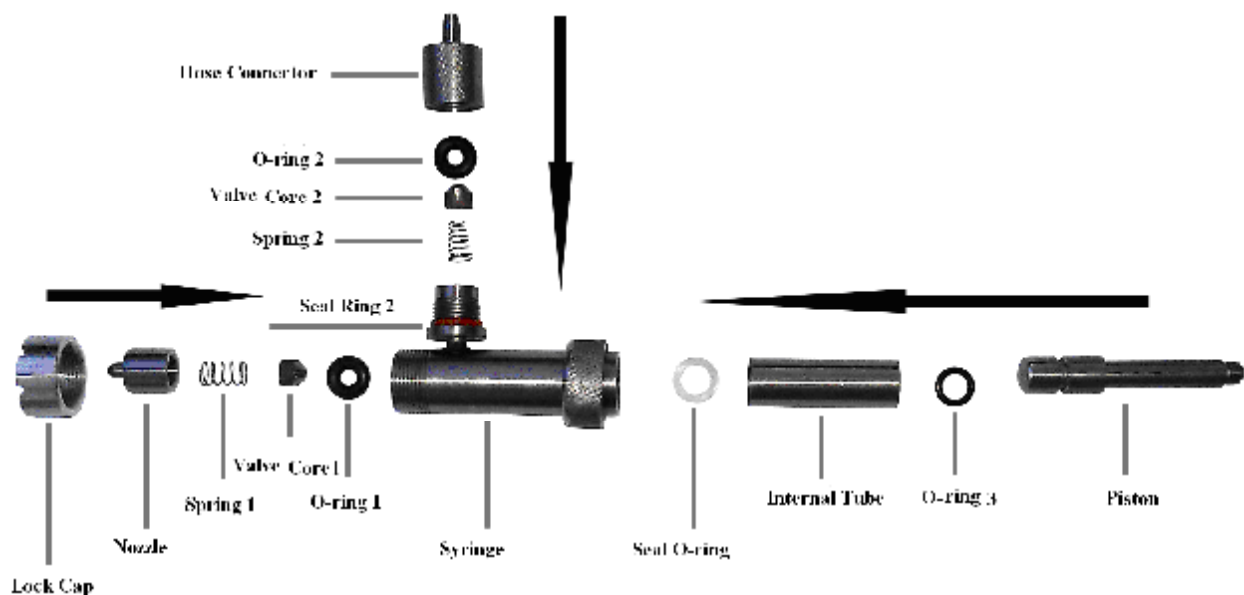
#### I Periodic Maintenance

Please follow the figure below (exploded view of injection head) to carry out the cleaning and disinfection process.

1. Replace O-ring3 of the piston.
2. Clean Lock Cap, Nozzle, Spring1, Valve Core1 and O-ring1. You may put them in the mineral-free water boiling for 20 minutes for disinfection.
3. Remove the hose connector on the top of injection head, disassemble it and clean the internal Valve Core2, Spring2 and O-ring2.
4. Reinstall the injection head by following the direction of the arrow as shown in the following figure. Prior to opening the injection liquid, air in the syringe should be excluded.

#### I Non-Periodic Maintenance

In case of wearing out, any of the following parts shall be replaced: O-ring3 of the Piston, O-ring1 of the Nozzle, O-ring2 of hose connector, Seal Ring2 of hose connector.



## 5.How to Change Injection Head:

Please follow the images below to change the injection volume (from 1ml to 2ml or vise versa):



Fig. 1: 1ml injection head;



Fig. 2: Holding down the ampoule fixer, unscrew the 1ml ampoule;



Fig. 3: Take off the 1ml injection head;



Fig. 4: Take off the piston by provided wrenches;

Then put the 2ml piston on using the provided wrenches as shown in Fig.4. Finally, screw in the 2ml ampoule, as shown in Fig. 2.

### Important Notice

- Stop injection when the Under Normal Voltage light is on, please charge the battery through provided battery charger!
- , Do not inject before the Injection light (green) is on!
- f* Please poke fur and lightly press animal skin when injection!
- ④ Ampoule head should be placed perpendicularly to the skin surface to avoid damage to the animal skin when injection!
- ⑤ Keep 2 to 3 seconds and then remove the injector after injection!

## Fault Repair

Fault	Reason	Failure Elimination	Remarks
Drug residues in animal skin	Not press the animal skin or angle is not correct when injection	According to the correct methods to firing	A small amount of drug residues is a normal phenomenon
	One-way valve is not sealed	Contact our technical staff	
Inhaler and firing button failure	Circuit fault	Contact our technical staff	
Power switch and reset button failure			
Indicator light inoperative			
Occurrence of abnormal noise during operation	Mechanical failure	Turn off the power, contact our technical staff	
Status indicators light in disorder	Low battery	Press the reset button and then charge the battery	
Green light does not shine and the Undervoltage light is on		Press the reset button and then charge the battery	

## Storage

Please place in a dry place below 50°C and keep out of reach of children

Please store sealed ampoule

## Contact us

Manufacturer: Changzhou ZA Medical Devices Co., Ltd, China.

Address: Room 2517, Building No. 2, Science and Education Town, Wujin of Changzhou, Jiangsu Province

Tel: 0519-86339763

Fax: 0519-86339763

ZipCode: 213164

Website: [www.zamedical.com](http://www.zamedical.com)

Name of commodity	
QC	
Accomplishment Date	