

Users Manual

Automatic Vaccinator for Fish



ZA Intelligent Agricultural Technology, Huzhou, China



Product Introduction

The fish auto-injection vaccination machine is a fish vaccination device developed by Zhong'an Agricultural Intelligence Technology, which is a solution for abdominal or back injection of fish fry of different sizes and thicknesses. For example, carp, mackerel, grass fish and so on. It can be used in water-soluble or oily drugs and vaccines for subcutaneous injections, suitable for large-scale aquaculture farms. The product is simple to operate and can be started without training.

1. Technical Specifications

Driving Power	Compressed air, air cylinder
Electrical Source	220V/110V, AC for controller, no electricity for machine body
Injection Dose	0.1ml~1.0ml adjustable
Injection Accuracy	$\pm 0.02\text{ml}$
Key Component Material	Stainless Steel, Medical Silicon/Nylon Tube
Suitable Injection Objects	Carp, mackerel, grass fish and other spindle-shaped fish fry
Suitable Vaccines	Water or oil based vaccines
Max. Injection Rate	1500 fishes per hour
Net Weight	15kg

2. Package Components

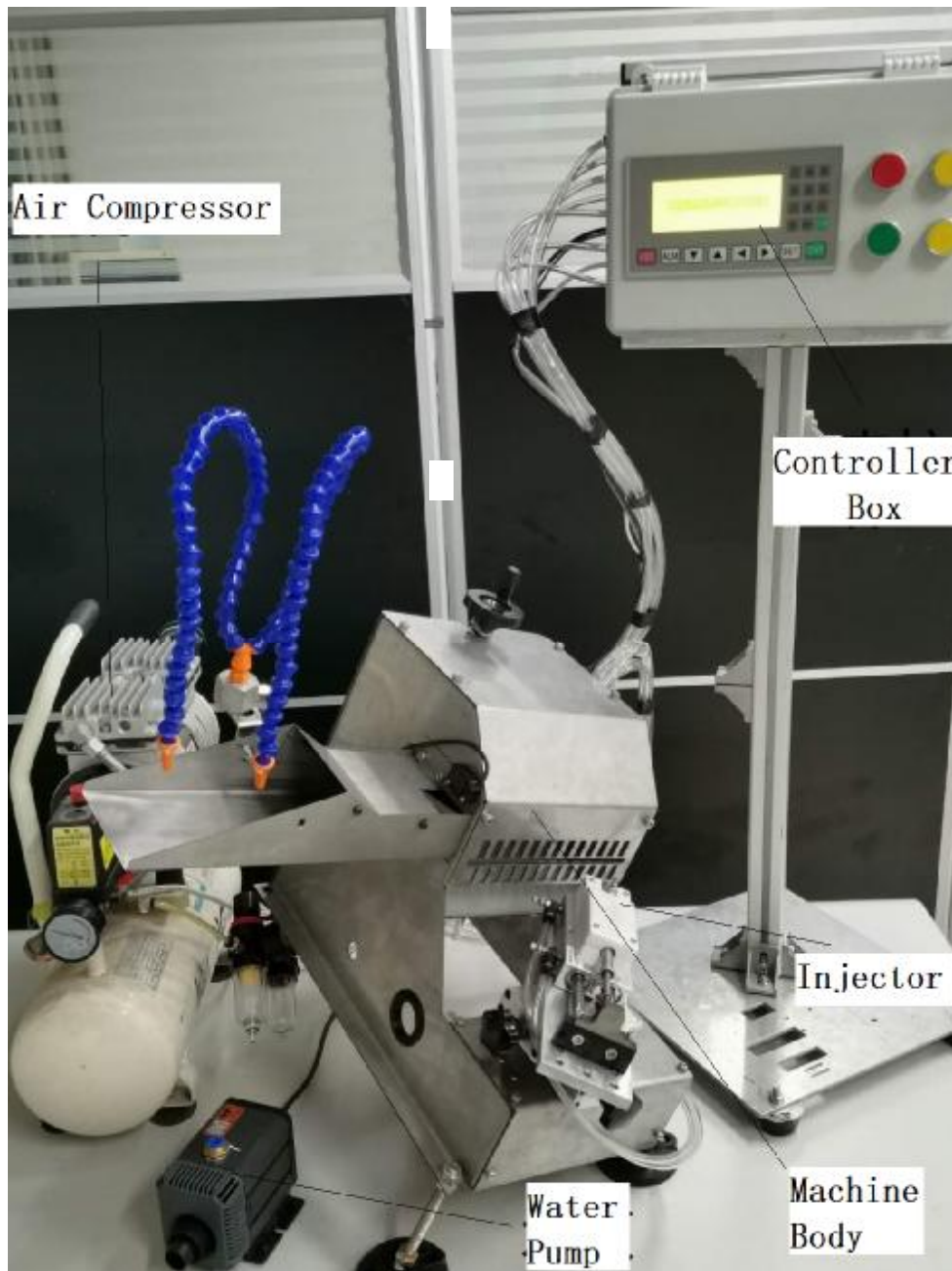
1. Machine Body
2. Controller
3. Air Compressor, Water Pump
4. No.9 Needles (20)
5. 50ml Syringe
6. Medical soft tube



7. Screw Driver

8. Manual

3.Product Overview



Installation Guide

1st Step: Needle Fix (Use the same size needles as provided)



- ① Counter clockwise rotate the needle fixer, take off the needle fixer, loose the needle and take off the needle.
- ② Get a new needle from the provided bag, put the needle on and tighten it than put the needle fixer on.



Needle Installation Complete

2nd Step: Soft Hose and Vaccine Bottle Connection





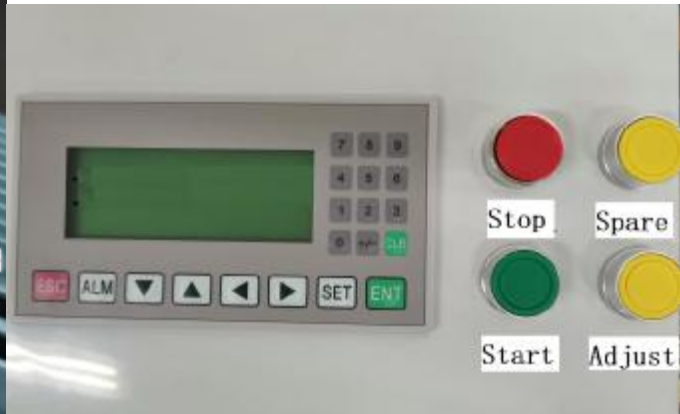
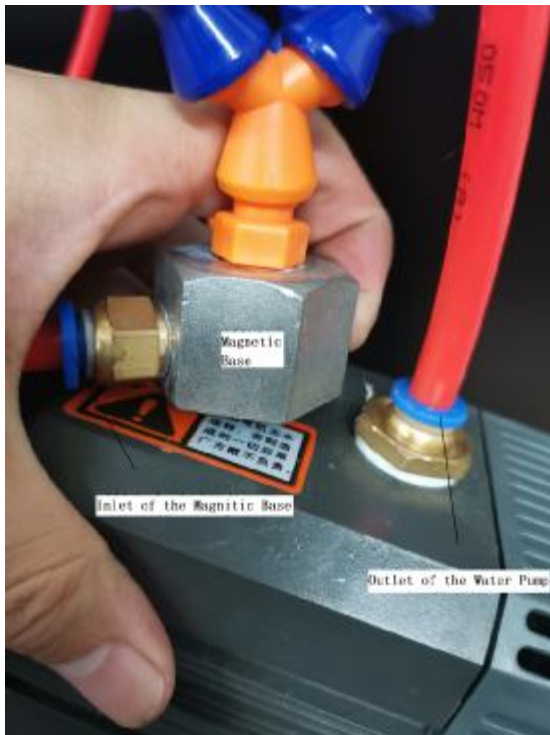
- ① Connect one end of the provided soft tube with a needle.
- ② Connect the other end of the tube with the connector at the top of the syringe.
- ③ Insert the needle into the bottle filled with vaccine solution.
- ④ Hang the bottle onto a hanger.



Vaccine Connection Complete

Operation Instruction

1st Step: Preparation before Injection





- ① Put the water pump into the sink, make sure that the sink is full of water and has submerged the pump. Do not make the water pump in the absence of water for too long. Connect the outlet of water pump with the inlet of the magnetic base of the bellows through a pipe.
- ② Plug in the power lines of the controller box, the gas pump, and water pump into a 220/110V AC power source.
- ③ Push the Start button, then Adjust button on the controller.
- ④ Slide the fry from the fish fry entrance into the equipment. Rotate the Splint Distance Adjustment Knob, observe the fish fry pressing from the grid. Make sure



the properly press for the safety of the fry. Press the stop button if the fry is not clamped at the time of injection. Repeat ③ for proper clamping.

- ⑤ According to the size of the fish fry and the injection position appropriate adjustment of the syringe location through the “Left and Right Knob” and “Back and Forth Knob” . Lock the appropriate injection position and injection depth. It should be noted that the injection hour needle will be pushed 15mm ahead, so the depth of injection according to the need to determine the distance between the injection needle and the injection hole.
- ⑥ Slide your hand underneath the light sensor for trigger action many times, until the needle has a steady jet ejaculation, indicating that the air in the pipe is excluded;



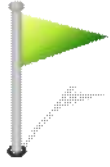
- ⑦ Press the text display CLR button to zero the LED screen display number.



Injection Preparation Complete

2nd Step: Injection (Novice operators are advised to follow the normal steps as following)

- ① The operator stands in front of the fish fry entrance and grabs the anaesthetic fish fry with one hand as shown.



② Holding the fry so that the fish fry belly to the side of the injector.



③ Observe the clamping and injection of fish fry and make appropriate adjustments in time.



The counter on LED screen increases automatically after each injection. When the machine sounds a "di..." blew, the injection counts up to 1000 times (The number can be set upon request).

Maintenances and Precautions

1. Regular cleaning of the internal pipes



- Take off the cover.
- ② Connect the infusion hose to a disposable syringe filled with sterilised alcohol (or boiled water, about 20ML).
- ③ Push the syringe, when there is a jet ejaculation from the needle, complete the cleaning and disinfection work inside the pipe.

Warning: When injecting again, first drain the disinfectant liquid from the pipe. The syringe can be drawn into the air and the disinfectant liquid in the pipe can be drained using the above operation method.

- ⑤ Turn on the cover.

2. Routine Sterilization and Disinfection



- ① Take off the cover of the injector.
- ② Hold the front and rear ends of the syringe and take off the injector.
- ③ Take off the soft tube.
- ④ Disassemble the syringe and disinfect it.





Method of Sterilization: The sterilization method can be any of the methods provided by vaccine manufacturers. The most common method is to boil or steam the items for a period of time.

* After disinfection, install all the disinfected parts back following the reverse procedure of steps 1-4.

Product maintenance and precautions

1. When the machine emits a "drop..." long chirp, pay attention to the injection count has reached the set number of times.
2. When recounting is required, press the CLR button to zero the number of injections displayed.
3. When not in use, turn off the power switch.
4. After use, open the flip cover and dry the internal and external water trails.
5. Remove the needle without injection to avoid injury to personnel.



If the light sensor is damaged during use, please contact the company technician for replacement.



For other use failures, contact company staff.



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