

E616S/E610S

Agriculture drone frame

Installation manual



Attention

This product is suitable for adults over 18 years of age. Due to the following reasons, the company will not bear any responsibility for personal injury, property damage, etc. , please read the following terms carefully:

1. Obtained through abnormal channels, using non-company products or imitation products.

Installation, setup, and use have not been performed correctly in accordance with this user manual.

2. Self-refitting and replacement of parts or accessories not produced by our company, causing damage to the aircraft due to poor operation .

3. The user controls the aircraft while under the influence of alcohol, drugs, or physical or mental condition.

4. Property loss and personal injury caused by the operator's subjective intentional or improper operation.

5. This product runs poorly due to the natural aging and wear of aircraft parts.

6. Use this product in a more severe and applicable environment than marked on this product.

7. Users use this product when visibility is insufficient and their sight is blocked.

8. Users use this product in government air control areas, no-fly zones, etc.

9. Product damage caused by abnormal use.

About E616/E610

The E616 / E610 series has been trusted by customers since it was put into the market. The series adopts an integrated waterproof design and supports washing. The shell surface is painted with Xingyao blue, which has a beautiful shape and eye-catching color. Among them, the new E616S / E610S arm folding parts abandon the previous aluminum design, using a new design of one-piece injection molding nylon carbon fiber material, the structure is more stable and durable; Unique C-shaped arm fixing clip design can effectively avoid the swing and sag of the arm during transportation. E616 can be directly upgraded to E616S, other parts are completely universal, only need to replace six arms, and the quality is better and the price is better. The power distribution board of the fuselage adopts a separate hidden design to isolate power and signals, optimize the internal electromagnetic environment of the fuselage, provide more space for the installation of flight control, and make wiring more concise. Its 16L tank has a large pot inlet, which makes the efficiency of dosing more efficient. It is directly fixed on the side of the tripod through the fixing seat on the power cord, which is beautiful and makes the plug connector more safe and stable. Two AS150 / AS150U options are available plug.

You can get the latest information on the EFT official website

Web : www.effort-tech.com



WECHAT

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Part Item



- | | |
|-------------------------|-------------------------------------------------------------------|
| ① Propeller | ⑦ Battery panel tank with ⑬ AS150 fixed seat filter |
| ② Hobbywing X8 motor | ⑧ Landing gear with fixed ⑭ 6-6 tee; 8-6 pneumatic tee, 8mm elbow |
| ③ One-piece molding arm | ⑨ Landing gear with ⑮ Pipe clamp Shock-absorbing sponge |
| ④ Extension rod nozzle | ⑩ 8mm pneumatic cover ⑯ Frame |
| ⑤ Cover of tank | ⑪ M4 * 10 tank fixing screw |
| ⑥ Water pipe | ⑫ Pump |



Important notes

- 1、 Please do not violently assemble during the assembly process, if you are in trouble, you can call 0551-65536542
- 2、 When installing the hose, do not bend it excessively, otherwise it will cause creases and affect the spraying effect.
- 3、 Be sure to connect the aircraft power supply after completing all installation and connection



Please prepare medium-strength screw glue when installing. First complete the unpacking inspection, and then carry out the installation of the tripod, the fuselage, the arm, the medicine box, the motor system, and the spray system.

The installation method of E610 / E610S / E616 / E616S is the same, the following illustration only uses the E616S frame as an example

Unboxing inspection

EFT provides users with the following documents

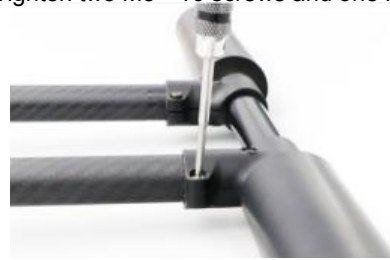
1. "Product Packing List"
2. "Product Installation Instructions"

It is recommended that users use the "Product Packing List" to check and carefully check whether the items are missing or damaged. If there is any problem, please contact our company in time. Read the "Product Installation Instructions" carefully, follow the instructions to complete the installation step by step, and carefully read the relevant precautions.

Landing gear installation



1. Insert the landing gear with the tank fixed parts into the Crossbar, Tighten two M3 * 10 screws and one M3 * 20 screw.



2. Pay attention to the installation direction of the tank fixed parts as shown in the figure, to be in line with the center screw of the landing gear.

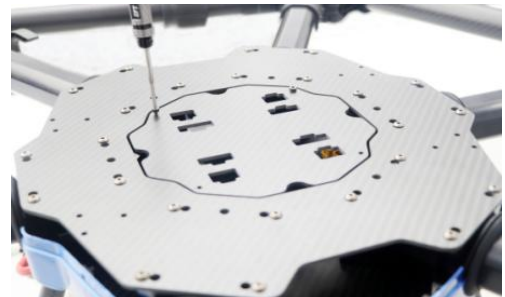


Frame installation

1. Unscrew six M3 * 8 round head screws and open the hood.



2. Unscrew six M3 * 10 screws and remove the central fixed carbon plate.



3. Check whether the internal structure is complete and the plug is complete.



4. Install the power supply fixing seat of the fuselage, align with the ring pattern.



5. Install the power cable fixing seat cover diagonally on both sides of the rear of the machine, and then install the tripod diagonal support to the fuselage, tighten the two M3 * 10 screws, pay attention to the medicine box fixing parts facing inward.

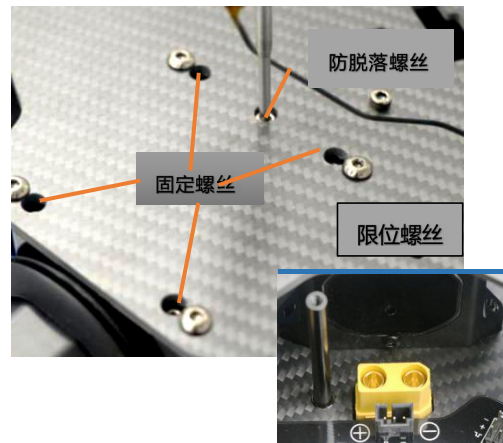


Arm installation

1. Place the C-shaped fixing clip on the mounting hole of the folding piece and tighten the M4 * 40 screws.



2. Loosen the fixing screw of the arm of the fuselage, put the arm into the pipe clamp, reach the limit screw, tighten the four fixing screws, and tighten the M3 * 10 anti-drop screw



Tank installation

1. Remove the bottom cover of the medicine box, install the pneumatic cover of the medicine box, pay attention to the installation of the pneumatic cover silicone pad.



2. The front of the tank is facing upward, and the tank inlet is in the same direction as the nose. Use the included L-shaped wrench to install four M6 * 45 tank fixing screws.



Motor installation

1. Use the snakeskin network tube to put the power cord and the ESC signal cable in. It is recommended to use a 10mm heat shrink tube to tighten the ends of the snakeskin network tube to avoid **bifurcation**.



2. Welding the XT90 male head, the body distribution board is the XT90 female head, pay attention to put the protective cap into the power cord, and pay attention to distinguish the positive and negative poles.



3. After completing steps 1 and 2, pass the power cable and signal cable through the arm and insert it into the power distribution board of the fuselage.

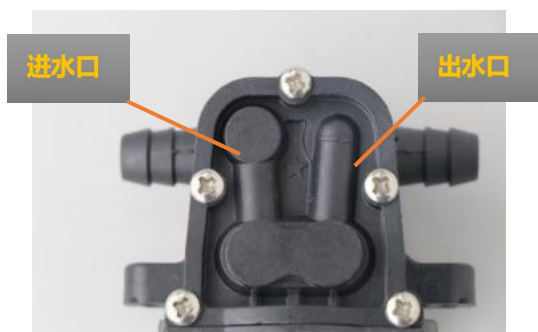


2. Use a spirit level to adjust the balance between the motor and the arm, and tighten the four to fix, Screw and insert the plug.



Spray system installation

1. The pump head with an arrow points to the water outlet, and the circle to the water inlet.



2. The water pump is recommended to be installed at the bottom of the tank or behind the tank. Tighten the four M3 * 8 screws corresponding to the installation holes of the medicine box, and connect the water outlet pneumatic head with an 8mm water pipe



3. If the pump governor is directly welded, the governor needs to be fixed first. It can be fixed with professional 3M glue and the output line of the pump is led out from the side hole of the fuselage.

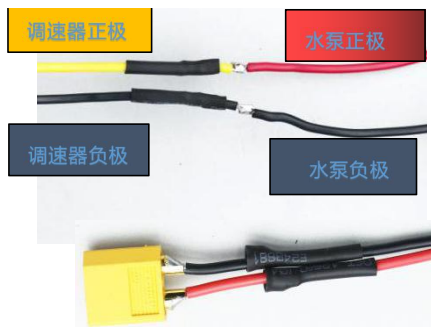
Two methods as shown



4. The governor can be fixed on the inside of the carbon plate on the frame and directly in front of the frame



5. Welding governor XT60 plug. Please refer to the pictures. Welding pump and governor wiring.



6. Remove the soft pad of the extension rod nozzle, and insert the round gasket.




7. Place the gasket of the motor base under the motor base and tighten two M3 * 8 screws



8. First use 8-8 pneumatic tees to extend 8MM water pipes, then connect 8-6 pneumatic tees, and finally use 6mm water pipes to connect each nozzle



 Please pay attention to safety during the installation process. EFT will not be responsible for the injuries and losses caused by improper use.

Appendix

specifications

Frame

E616S

Symmetrical motor wheelbase : 1628mm

Opened size : 1720*1500*556mm

Folded size : 1073*956*546mm

Tank capacity : 16L

Frame weigh :7kg(Without spray system)

E610S

Symmetrical motor wheelbase : 1404mm

Opened size : 1495*1308*500mm

Folded size : 945*848*500mm

Tank capacity : 10L

Frame weigh :5kg(Without spray system)

Recommended configuration

E616S

Motor : X8、 8118

Propeller : 28-30inch

ESC : 80A FOC

Max takeoff weight : 36kg

Max Supply voltage : 12S

E610S

Motor : X6、 6215

Propeller : 23-24inch

ESC : 80A FOC

Max takeoff weight : 25kg

Max Supply voltage : 12S

Speed govermor of pump

Product Specifications

Size : 47*34*24mm

Weight : 72g

Installation hole distance : 54-60mm

Supply voltage : 15-60V

Output voltage : 12V

Max current : 6A

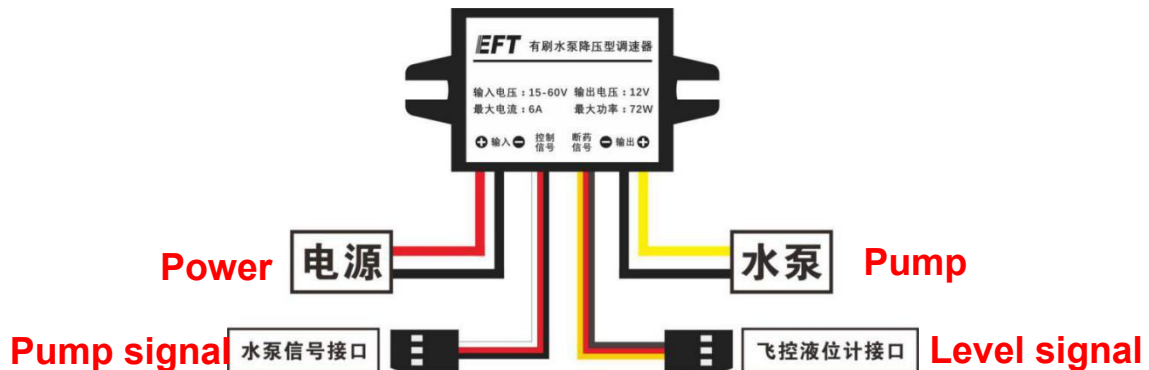
Max power : 72W

Stroke range : 1120-1920 μ s

Drug off signal: with water-high level without water-low level

Use method of drug breakage detection function: The drug breakage detection factory is currently limited to the use of 25W water pump. Connect the 3pin line of the drug breakage signal to the detection interface of the flight control liquid level meter. No water is low level, the air in the water pump needs to be exhausted before take-off to avoid misjudgment after take-off.

Wiring diagram



Light description

Indicator status	status
Red light flashes slowly (2 times / sec)	No input signal, need to connect the signal line
Red light flashes quickly (10 times / sec)	Input signal error, signal travel is inconsistent
Red light always on	Input signal is normal, the pump is off
Yellow light always on	Water shortage reminder, medicine break signal output low level
Green light always on	There is water in the water tank, and the medicine-breaking signal outputs a high level

* If you use brushless water pump, you need to know the relevant information of the brushless water pump step-down speed governor, please contact our company in time.

More product supports

EFT WEB : www.effort-tech.com

EFT WECHAT:



This manual is subject to update without notice

If you have any questions or suggestions about the manual, please contact us

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