

Equipment safety operation procedures

- (1) Equipment wiring: Connect three fires and one ground in the aviation plug, insert the panel interface, turn on the switching power supply, and the power indicator light can display normally. If the power indicator fails to display normally after hearing the dripping sound, it may be because of successive protection. Replace two of the three main fire wires arbitrarily.
- (2) Operation: Turn on the power switch, turn the knob switch to the remote control, the remote control is activated, and the remote control can be used for remote operation.

Turn the knob switch to the panel, and the switch on the panel is activated. You can use the forward flip and reverse flip buttons on the panel to operate.
- (3) The operator must receive safety training before taking the post and operating independently.
- (4) Check the overturned chain regularly (30 days) to ensure that the chain tension on both sides is equal. Regularly check whether the screws at the fastening parts of the motor are loose, and properly add grease at the gear ring and chain of the motor to ensure its lubrication.
- (5) Before operation, it shall be operated under no-load, and the load operation can be carried out only after all parts work normally.
- (6) The mold hoisting shall be placed in the middle and close to the vertical surface of the turnover table as far as possible to reduce the damage to the coil and equipment during the turnover process.

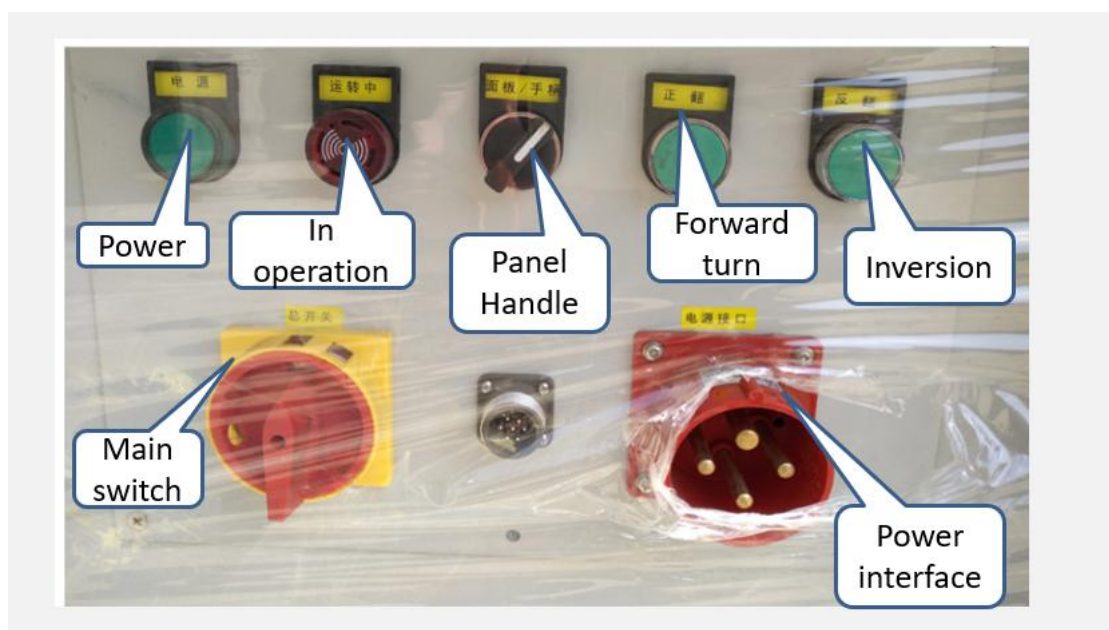
- (7) The remote control of the equipment is used for remote operation, and the panel switch is only used for emergency standby. Do not stand or stop in the turning direction.
- (8) It is strictly forbidden for the mold to exceed the turnover table. Exceeding the table will cause the center of gravity offset, and there are potential safety hazards during turnover .
- (9) Do not leave the post at will during the operation of the equipment. Pay attention to the operation of various parts at any time. If any abnormality is found, it shall be handled properly before starting the machine.
- (10) At the end of each shift, cut off the working power supply and clean the worktable to prevent water and oil from entering the equipment electric box.
- (11) The gear chain shall be adequately lubricated and coated with grease regularly. The equipment circuit shall comply with relevant industry standards and have corresponding protection against overload and lack of equality. It is strictly prohibited for non electrical personnel to repair electrical equipment and circuits, and it is strictly prohibited to modify equipment circuits without authorization.

Equipment maintenance manual and operating instructions

Equipment wiring: AC380V, 50Hz 1.6 KW Connect three fires and one ground in the aviation plug (R S T PE), Turn on the switching power supply, the power indicator is normal. If the power indicator fails to display normally after hearing the dripping sound, it may be because of successive protection. Replace two of the three main fire wires arbitrarily.

Connect three fires and one ground in the aviation plug, plug it into the power interface on the panel, turn on the main switch, and the power indicator light is green

Panel / handle: turn it on the panel and turn it upside down to activate;
Turn it on the handle and activate the wireless remote control



Power: Power indicator. When the power switch is turned on, the indicator is in normal state.

In operation: The buzzer device sends a buzzer alarm when the equipment is running.

Emergency stop: Twist switch, stop button in case of emergency.

Panel / handle: Turn it on the panel and turn it forward and backward to activate; Turn it on the handle and the wireless remote control handle is activated.

Forward turn: Turn the device clockwise.

Inversion: Turn the device counterclockwise.

One、Nature of the machine

1.1 one point one performance parameter

Item	Parameter
	Model: FZ03T
Supply voltage	AC380V,50Hz 1.6 kw
Flip	Speed $40 \pm 10S$,
Flip body	Limit or adjust the angle standard of the swivel 90°
Flip object	Maximum turnover weight: 3T
	Maximum turning angle: 90°
Overall dimension	2020mm*1240mm*1480mm
Machine weight	About 1.3T

Working noise	≤80DB
Environment condition	Humidity≤98%, temperature 0±40
Worktable	1200*1200, 1200*1400 (V-bed)

2 Overview and application fields

This machine can adapt to the turnover requirements of goods of different specifications, and realize the operation goal of converting horizontal to vertical or vertical to horizontal. It is widely used in metallurgy, mould, papermaking, refrigeration, refrigeration industry, household appliance industry, ceramic industry, hardware industry, chemical industry, can making industry and other industries.

Basic feature:

- 1、 Wireless remote control, remote operation。
- 2、 Hard tooth surface industrial reducer。
- 3、 The control system adopts 24V safety voltage to ensure the operation safety of employees。
- 4、 Four supporting wheel mechanism。
- 5、 Thick and solid body design, durable。

Safety precautions for using the machine

1. Please confirm the power supply used by the machine and do not plug in the wrong power supply. The machine adopts three-phase AC380V, the two-color wire is the grounding wire, and the shell is used for protective grounding. When the machine is running, it is strictly prohibited to step on the machine;
2. It is not allowed to install the machine in a soft site;
3. It is not allowed to put the object to be overturned on the edge of the overturned body;
4. The power must be unplugged at the end of the work;
5. In case of emergency, press the emergency stop button switch, or release the up or down button, and the motor will stop turning the machine。

6. After completing the work of the day, clean the machine once;
7. To ensure safety, please do not disassemble the electrical equipment at will;
8. Only electrical technicians can overhaul electrical equipment.

Two. Specification, installation and commissioning of the machine

2.1 Specification and size: 2020mm*1240mm*1480mm

2.2 Model of machine: FZ03T

2.3 Date of manufacture: See certificate

2.4 Install

1. Lift and level the upender with a hoist or shovel it down with a forklift and put it on the ground to ensure its level.

2. If there is any inclination, please level it with steel plate.

Confirm that the power supply is connected correctly, close the switch of the electrical control box, and check whether the power indicator is on. If not, check whether the socket of the power supply falls off.

2.5 Carry

Handling with forklift or crane.

2.6 Working environment conditions

The working environment shall be far away from fireworks, dry ventilation and corrosion of corrosive substances, with humidity $\leq 98\%$. The normal ambient temperature is within 0 ± 40 degrees, and there are no special requirements for electromagnetic radiation.

2.7 Inspection before commissioning and operation

1. Check whether the fastening body is loose.

2. Check whether the motor and electrical equipment are dry and whether the insulation is good.

3. Check whether the external power supply meets the power requirements of the machine.

2.8 Air transfer

1. After the power supply is connected, close the door of the electrical box.

Generally, the chain swing shall not exceed $\pm 5\text{mm}$. If it exceeds, it needs to be

tightened. Check whether the turnover is continuous. If it is not continuous, check whether the chain is stuck or the line is broken.

2. Start the machine, turn the knob on the panel switch to the panel or remote control mode (press the on button for remote control mode), press the up and down buttons to turn over, and release the button to stop when it is close to 90 °. If it reaches 90 °, it can also stop automatically. If it does not stop, it is necessary to adjust the travel switch before it can work.

Three. Working principle

The overturned object is placed at the center of the overturned body and close to the overturned surface. Firstly, the turnover body rotates to drive the object to turn over, so that the object can turn 90 °.

Four. Machine operation

1. Before starting the machine, press the off button (switch) to make the on button pop up (off).
2. Press the on button when starting the machine.
3. Press the up button to turn the body to start turning, release the button to turn the body to stop turning.
4. Press the next button to turn the body to start resetting, and release the button to turn the body to stop resetting.
5. When the empty car runs, make the turnover body stop at 90 °, lift or shovel the overturned object to the center of the turnover platform and close to the vertical plate.
6. Press the button to flip. When it approaches 90 °, release the button to stop. If it reaches 90 °, it can also stop automatically.

Five. Faults and Countermeasures of reducer:

Fault item	Possible causes	Countermeasures
	Continue noise	Adjust gear
	Continuous noise	Replace the bearing
	Periodic murmur	Clean the inside

Noise	Bearing or gear damage	Replace the bearing or gear
	Insufficient oil	Increase oil volume (appropriate)
Vibration	Poor installation	Readjust the installation
	Insufficient strength of fixed seat	Strengthen the strength of the fixed seat
	Bearing damage	Replace the bearing
	Bad gear	Replace the gear
	Poor rotor correction	Replace the rotor
Overheated	Gearbox overheating	Replace the gear set
	Poor bearing oil seal	Replace the bearing or oil seal
	Insufficient oil	Increase oil volume (appropriate)
	Overload operation	Adjust the load appropriately
Oil leakage	Poor oil seal	Replace the oil seal
	Too much oil	Adjust the oil quantity
	Gasket damage	Replace the gasket
	The center line of output shaft is offset by external force	Adjust external force

Six. Inspection items in case of abnormal motor operation:

If the motor operates abnormally, please check it according to the following table

Phenomenon	Confirmation content
The motor does not rotate or operates intermittently	(1) Whether the motor power supply meets the specifications?
	(2) Whether the motor power supply meets the specifications?
	(3) Whether the load is too large?
	(4) Is there any poor contact when the terminal block is used or the

	connection needs to be extended?
	(5) Whether the capacitor attached to the single motor or the capacitor with the required capacity recorded on the nameplate is connected according to the wiring diagram?
The motor turns and stops	(1) Is the power connection correct?
	(2) Whether there is poor contact when using terminal block or matching terminal?
	(3) Whether the capacitor attached to the single-phase motor or the capacitor with the required capacity recorded on the nameplate is connected according to the wiring diagram?
The motor runs in reverse	(1) Is it connected correctly according to the wiring diagram? Refer to the wiring diagram again.
	(2) The reduction ratio of the reducer is different, and the operation direction of the output shaft is also different. Please refer to the product manual of the reducer.
	(3) Whether the capacitors attached to the single-phase motor or the electrical appliances with the required capacity recorded on the nameplate are connected according to the wiring diagram?
	(4) Check whether the direction is correct by visual inspection. The running direction of the motor is to judge whether it is clockwise or counterclockwise by visual inspection of the running direction of the output shaft.
Abnormal heating of motor (the temperature of motor shell exceeds 90 °C)	(1) Whether the motor voltage meets the requirements?
	(2) Whether the motor load exceeds the specified requirements?
	(3) Whether the capacitor attached to the single-phase motor or the capacitor with the required capacity recorded on the nameplate is connected according to the wiring diagram?

The motor makes a sound	(1) Is the motor reducer assembled correctly? Please refer to the product manual of the reducer.
	(2) Is the same reducer used as the motor?

Certificate

Product name: 90 degree turnover machine

Product model: FZ03T

Factory number: BH2022013015

**The products pass the inspection and are
allowed to leave the factory.**

Examination clerk: 002

Inspection date: 2022.5.5

Product warranty

Thank you for choosing the industrial turnover machine produced by our company. If the machine breaks down due to its own reasons, we will repair it for you by our service network in Shanghai and all over the country according to the warranty terms.

Warranty terms

Within one year from the installation and commissioning of the turnover machine manufactured by our company, if the machine fails, our company is willing to repair and replace the damaged parts for free according to the following provisions.

1、 The warranty is valid only if:

1)、 This product is operated and maintained according to the user manual of the company.

2)、 The failure of this product is not caused by improper installation, operation, repair, negligence, natural disaster or violence of the user.

3)、 All faults are repaired by our service personnel or special service providers.

2、 Users should keep the warranty card properly and ask for instructions if necessary to obtain rights and interests protection.

Warranty card

User name: _____

Address: _____

Telephone: _____ Zip code: _____

Date of purchase: 2022.03.14

Model: FZ03T Factory number: BH2022013015

Remark:

Repair date	Faults and maintenance	Repair date	Operator of user unit (signature)	User's official seal