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# The Instruction of Rice Washing Machine YXM-500

**Dear users :** Please read the introductions of our product detailedly before you use it.

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# User's Manual for YXM-500 Rice Washing Machine

## 1 Overview

### 1.1 Purpose

YXM-500 rice washing machine is new product developed by our company according to the feedback information on the market, which is the ideal equipment to wash the particle grain, such as rice. It is used for canteen, fast food restaurant and food processing plant to wash the grain.

### 1.2 Features

With scientific design and compact structure, the machine can continuously wash the rice. The rice can be rapidly separated from the stone, mud, chaff and insect and discharged from different exits at high speed when washing. It features with high efficiency, easy operation using less labor, effort and water. The machine could not only wash the rice, but also the ormosia, mung bean and other grain in particle.

## 2 Structure feature and working principle

### 2.1 Main structure

2.1.1 The machine consists of frame, sand separator, floating article separator, rice bucket, water saver and pipeline (refer to Fig. 1 for the structure)

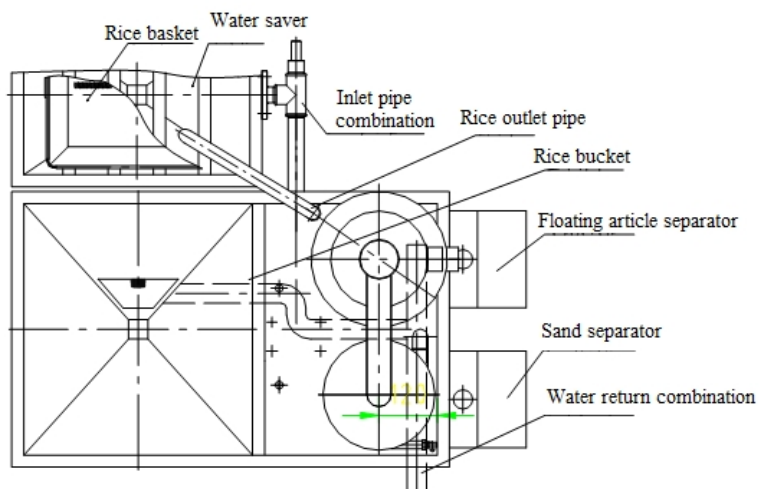


Fig.1 Main structure diagram

**2.1.2** The machine is made of high quality stainless steel to ensure no rust, corrosion, toxic and harm after long-term working, meeting the food hygiene requirement

**2.2 Working principle**

First, connect through the water source and turn on the power. Adjust the pressure to separate the stone and put the rice in the bucket. With the effort of the separator combination and different pressure of the water, the stone and mud are discharged from the sand separator; the chaff and insects are discharged from the floating article separator; the clean rice is discharged in the rice basket through the pipe and the rice washing is completed.

**2.3 Water pipe system**

See Fig. 2 for the water pipe system of the machine.

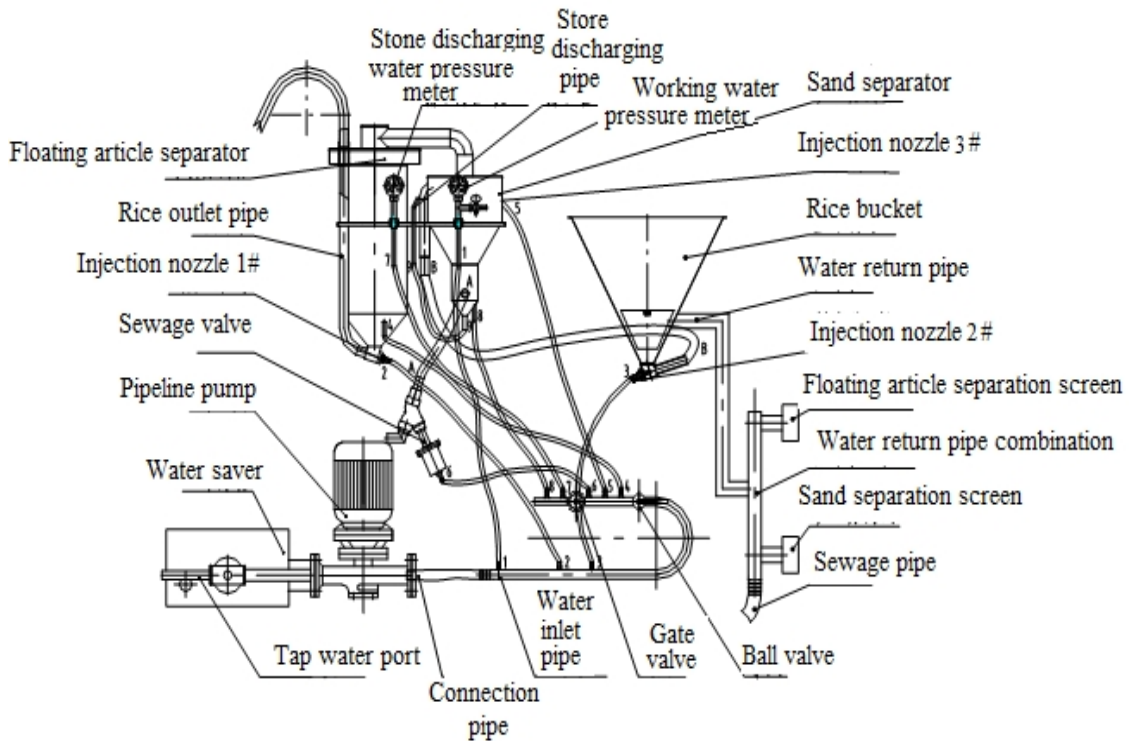


Fig.2 Pipe diagram

### **3 Technical parameter**

- a. Washing capacity: 500kg/h
- b. Stone discharging rate:  $\geq 95\%$
- c. Pipeline pump: 25SG6.5-30 Q=6.5m<sup>3</sup>/h Pump lift=30m N=1.5kW
- d. Rated voltage: 3~380V
- e. Rated frequency: 50Hz
- f. Working water pump: 0.23-0.28 Mpa
- g. Stone discharging water pressure: 0.08-0.10 MPa
- h. Stone discharging pipe diameter:  $\geq 11$  mm
- i. Water consumption: 0.0065M<sup>3</sup>/ kg
- j. Water proof class: IPX1

### **4 Dimension and weight**

- 4.1 Outline dimension: 1100×1000×820mm
- 4.2 Machine weight: 88 kg

### **5 Installation and commissioning**

5.1 Place the machine on flat ground and ensure the stable operation of the machine. Connect the three-way pipe on the water saver to the joint of the water pump inlet. Connect the three-way pipe inlet and the tap water pipe with rubber pipe.

5.2 Inspect whether the power voltage meets the working voltage of the machine. Extend the flexible power cable and connect the olive core with grounding mark to the ground. Connect the other three cores (two for single-phase motor) to the terminals when the switch is off. For safety, air switch is used for the power switch.

5.3 Open the water source valve. When the water saver is filled with water, close the power switch and the machine operates stably. The machine can be tested when it operates without abnormal noise.

## 6 Usage and operation

6.1 Open the water source valve first and make the control valve lever at the working position of the ball valve to hang the sewage pipe. When the water saver is filled with water, close the power switch. The working water pressure is 0.23-0.28 MPa and the stone discharging pressure is 0.08-0.10 MPa when the machine works normally.

6.2 Put the rice basket on the water saver and place the floating article screen and sand screen. Turn on the power switch with rice outlet pipe facing the bucket. When the water in the floating separator over flows, turn the rice pipe to the basket to pour the rice into it; the rice washing machine work continuously to separate the sand and discharge it via the discharging pipe. The chaff and other floating articles will automatically flow into the floating article screen. The grain will flow into the basket trough the discharging pipe.

6.3 Turn the control valve lever to the dirt discharging position when turning off the machine. Switch off the water and power after discharging the water and articles in the machine.

Note: do not turn off the machine when the machine works continuously or there is rice in the pipe; the water level in the water saver shall not be lower than 1/2 of the height when turning on the machine. If it is lower, fill the water saver with clean water

## 7 Common fault analysis and troubleshooting

The fault of the rice washing machine is caused by the following factors

- a. Incorrect operation procedure
- b. Reverse rotation of the motor, too low water pressure
- c. Foreign matters in the pipe, impurities in the rice blocking the delivery pipe

Refer to the table below for common fault analysis and troubleshooting

<b>Fault</b>	<b>Reason</b>	<b>Solution</b>
1. The rice can't flow from the rice outlet pipe but over flows from the floating article separator	Blocked pipe	<ol style="list-style-type: none"> <li>1. Prepare an empty rice basket and put it at the dirt outlet, turn the control handle to the discharging position to clear the remaining rice in the machine</li> <li>2. Remove 1# injection nozzle for inspection and wash the rice out of the pipe</li> <li>3. Inspect whether there is foreign matter at the bottom of the floating article separator</li> </ol>
2. The stone discharging pipe doesn't work or discharge the rice instead of stone	Abnormal stone discharging pressure	Inspect the stone discharging pressure meter and adjust the pressure within the specified range
	Blocked stone discharging pipe	<ol style="list-style-type: none"> <li>1. Increase the stone discharging water pressure "+", use the water to wash the stone discharging pipe; pull off the plastic hose when there is no rice in the machine and connect it firmly after clearing the residual in the pipe</li> <li>2. Pull off 8# water pipe and turn on the machine after eliminating the dirt in the pipe. Adjust the stone discharging water pressure; turn the control valve handle to the discharging position; forcibly blow the stone discharging pipe for several times and the stone will be discharged from the outlet (see Fig. 2)</li> </ol>
3.the rice washing speed is normal but the water doesn't flow out of floating article separator. The rice is not cleaned	Blocked pipe	<ol style="list-style-type: none"> <li>1. Inspect whether there is impurity in 4# pipe (See Fig 2).</li> <li>2. Inspect whether the stainless steel screen at the bottom of the bucket is clean, whether the water return is smooth</li> </ol>
4. Loose discharging port of the dirt with water overflowed	the sewage valve is seized by the stone and impurity	<ol style="list-style-type: none"> <li>1. Wash the sewage discharging for several times with water</li> <li>2. Remove and disassemble the sewage valve to clear the impurity in it.</li> </ol>

Fault	Reason	Solution
5. The sand is not separated completely while the water discharging of the stone discharging pipe is normal and the stone discharging pressure is normal. When discharging the residual, the rice discharged from the sand separator is more than usual, or more than 0.5 kg	Blocked pipe	Remove 3# injection nozzle and learn the blockage in the pipe (See Fig 2)
6. The working water pressure is not in the specified scope	Motor rotates reversely	Adjust the power cable
	Pipeline pump blockage	Remove the baffle disk and clear the impurity in the pipeline pump
	The screen of the water saver is blocked by the impurity	Inspect and clear the impurity on the steel screen at the port of the water saver
7. The rice doesn't flow from the bucket or the washing speed becomes slow	The sewage pipe is not hanged	Hang the sewage pipe
	The working pressure is abnormal	Adjust it to normal working pressure
	Inadequate water in the water saver	Use water to directly fill the water saver
	Water saver is too dirty	Clear the impurity in the water saver
	Blocked water inlet of the screen in the water saver	Remove the inner screen and clean it.
	Blocked rice delivery pipe	<ol style="list-style-type: none"> <li>1. Touch the bottom of the bucket to see whether there is impurity with hands</li> <li>2. Prepare the rice basket and pull off the plastic rice delivery pipe at the back of the machine, the rice in the pipe will flow out rapidly; if the speed is still low, turn off the machine and remove 2# injection nozzle, inspect whether there is impurity.</li> <li>3. Fill the water into the sand separator of the dirt discharging with rubber pipe; with 50 cm 16# or 18# steel wire to bend it as hook and make it go through the elbow pipe where the plastic pipe is pulled off for several times; the rope, nylon paper and other impurities will be discharged automatically.</li> </ol>

## **8 Safety protection device and cautions**

8.1 The machine has grounding bolt, please reliably connect the grounding cable to avoid accidental injury.

8.2 Never turn on the switch in the machine maintenance to avoid danger

8.3 Never carry out the repair an maintenance in any form when the machine operates to avoid personal injury.

## **9. Maintenance and repair**

All the maintenance and repair shall be carried out when the power is cut off.

**9.1** Carefully clean the machine after the operation to ensure no rice and water remaining in the pipes. Never use water to wash the pump when cleaning.

**9.2** Inspect the pipe clamp monthly and tighten it timely to avoid the loosed clamp from impacting on the operation.

**9.3** Stop the machine for inspection in case of abnormal noise in working. The machine could continue to work after the fault is eliminated.

## **10 Transportation and Storage**

10.1 Do not bump, lean or invert during transportation to avoid damage and affecting the machine use.

10.2 The machine should be put in dry, free from corrosion gas condition, and avoid contacting with erosive objects when it is not used for a long time.