



丹阳市大粮机械厂

Danyang Daliang Machinery Factory

Execute Standard: JB/T6286-1999

Less-power

Low-temperature

High productivity

Compact construction

Apt to operate and maintain



### NPF series jet rice mill

#### 1 Brief:

NPF series of jet rice milling machine is based on several decades rich experiences and advanced technology imported from the beginning of eighties. It belongs to cereal processing machines. Its main use is fitted with the rice huller to product white rice. It can also made rice of grain by it-self directly. All the machines have blasting devices, husks can be separated automatically from rice. So the finished production has the following characteristics cleaning, less husks and low-temperature. The machine can use less-power and give high productivity. It owns beautiful appearance and compact construction, too. It is also apt to operate and maintain. It suits the medium and small rice mills both in cities and countryside.

#### 2 Parameter:

Type	NPF80	NPF114
Capacity (Kg/h)	350-500	500-600
Main stage velocity(R/M)	850-950	800-850
Power (KW)	7.5-11	15
Weight (Kg)	180	250
Dimension (mm3)	1150*1116*1420	1400*1300*1500

#### 3 Mobile rice mill:

It is composed of NPF114 rice mill, 9FQ4020 pulverizer (paddle mill), Lower speed elevator and Tri-wheeled Agricultural Transport Vehicle



LJC-1 mobile rice mill

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# **Double Blowers & Fine Chaff Rice Mill**

**(NPF80/110)**

## **User's Manual**

**Manufactured by Danyang, Jiangsu, China**

## **Part 1. Introduction**

This machine is an improved model on Model:NPF80/110. It is co-designed with Wuxi Light Industries University of China, to meet customer'S requirements of combining the functions of rice milling and chaff grinding in one machine.

It's characteristics are :

1. Compact structure, easy operation, light weight, excellent effectiveness and merging rice milling and chaff grinding functions into an organic whole. The processed rice has the advantages of high-quality, brightness, low temperature and low percentage of breakage. The chaff after grinding is fine for animal'S feed.
2. Can be combined with rice huller(Model : NZJi 5 / 1 5 — II)to brighten and finish the grains of rice.
3. Can be operated on the move if equipped with a diesel engine, extensively used in countryside, mountain area, etc.

## **Part 2. Main Parameter**

**Output:** NPF80:(300—500) Kg / hour NPF110:(500-600)Kg/hour (Paddy)

**Power:** NPF80:11KW NPF110:15KW, Model: Y1 60L. 4

**Main shaft diameter:** 42 (Should be anti-clockwise rotation)

**Main shaft speed:** NPF80:(850-950)rDm NPF110:(800—850) rDm

**Attention:** (Should be anti—clockwise rotation)

**High—pressure blower speed:**NPF80:3500rpm NPF110:3600 rpm

Chaff absorbing blower speed: NPF80:4000rpm NPF110:3650 rDm

**Net weight:** NPF80:180kg NPF110:250 Kg

**Overall dimensions:**

NPF80:1150X1116X1420(mm)

NPF110:1400X1300X1500(mm)

**Install dimensions:** NPF80:435X280(mm) NPF110:582X296 (mm)

## **Part 3. Technological Process**

From the feeder into the machine, paddy is pushed along the main shaft to the pressure exit by the screw propeller. The action of the resistance of the pressure exit and the pushing of propeller force friction happening in paddy and finish rice—hull process.

The husked brown rice is sent into the milling cabin where the brightening process is finished by the iron roller, then the grains of rice which meets your quality need is drained out of rice exit. At the same time, the wind generated by the high-pressure blower enters into milling cabin, through the hole of the main

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shaft and along the iron roller, to bring chaff powder into the chaff cabin with it, and carry part of the heat generated in the brightening process away. In addition, the sieve frame circles the main shaft at 1 rpm by the turbine retard to change the location of the sieve sheets, to dredge the passage of draining chaff, and to decrease rice temperature .

High-pressure blower and chaff-absorbing blower work at the same speed, therefore, the quality of rice is greatly improved.

#### **Part 4. Operation Procedures**

Before operation, make sure the machine is stable installed, and all its parts are tightened firmly, let the machine rotate idly for 3--5 minutes. During this period, check if the rotation direction of the high-pressure blower is same as the wind pass, so that the wind can be blew out from the main shaft hole, and observe if the sieve frame rotating or not, etc.

After checking, fill paddy into the feeder and open the feeding plate gradually to the full, then regulate the paddy flow to wanted level by adjusting hand-wheel, the flow is indicated on the scale outside, recommended between at scale 2.5--5.

The fineness of the grains of rice is decided by the pressure spring of resistance system, whose strength is regulated by the hand wheel on it, Attention should paid to the wind strength handle, on the right of the rice exit, which control the wind strength for absorbing chaff, if it is too strong the grains of rice will be absorbed into chaff , on the contrary, the chaff will be in rice.

#### **Part 5. Cautions:**

1. The ground should be smoothly covered with concrete, (or cement platform) to meet the machine at the same level. Install the machine and calibrate the level to ensure the coaxial degree of all parts before the concrete become solid.

2. Close the feeding plate. When turn on (off) the machine, Fill paddy after everything goes well, Open the feeding plate gradually to the full, adjust the paddy flow and the pressure of rice exit by respective hand wheels to make the machine work at its full precision.

3. The sieve sheets are easily damaged by wear and tear on the side of exit, for prolonging its life, turn it over after having used for a time, but if rice leakage happens, replace the damaged ones at once.

4. Check bearings regularly, stop immediately for check if it is abnormal.

5. Replace the iron roller if it is seriously damaged with wear and tear.

6. Operate within the limit of speed, No exceeding.

7. Ensure the power voltage to be within the limit of the motor.

8. Tighten all belts and melt wax on them before operation to make them work smoothly.

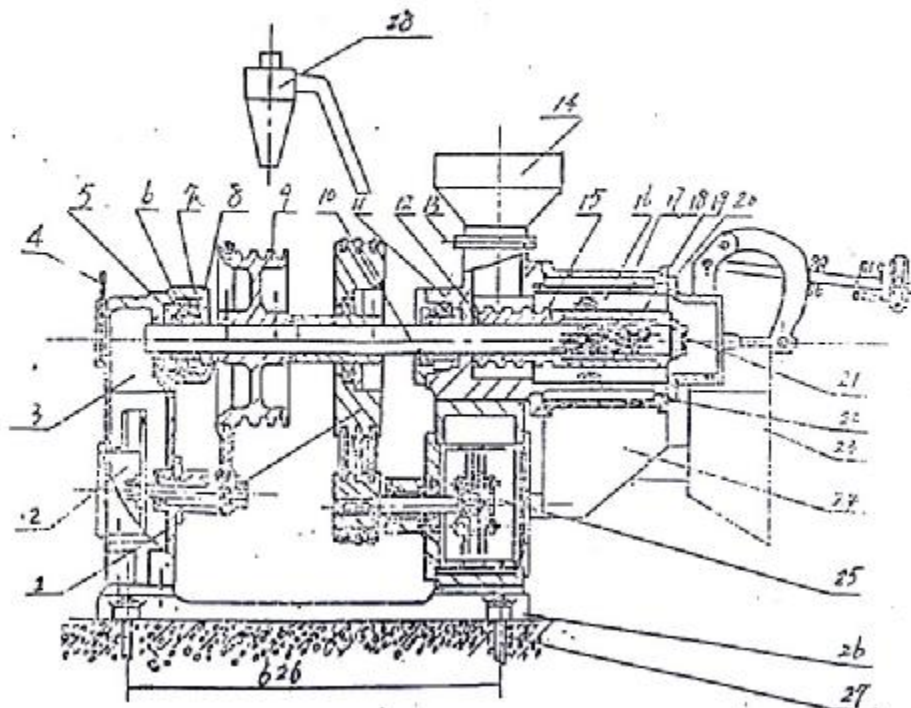
9. Clean and dry paddy before operation, especially no metals or stone, if it is necessary to install magnet in the feeder.

## Part 6. Troubleshooting

Trouble	Diagnosis	Disposal
1. Belt dropping	1).The belt wheel isn't parallel with the machine 2). Belt loosing	1).Regulate to be parallel 2).Tighten
2. Machine vibrating	The parts of machine or the ground base untightened	Tighten
3. Machine works overload or motor is overheat with buzzing	1).The motor power is too low. 2).Paddy isn't dry. 3).High pressure on the rice-exit 4).Power voltage low or unstable. 5).Too much feeding	1).Replace with high power motor. 2).Dry paddy. 3).Decrease pressure. 4).Stabilize paddy. 5) Decrease paddy flow
4. Sieve sheets damaged or broken.	1).Stone or metals enter into the feeder. 2). Used for long time.	1).Replace it and clean paddy. 2).Replace regularly.
5. Machine obstructed	1).Paddy straw blocks the entrance. 2).Chaff blocks the rice exit or rice milling cabin.	1).Clean paddy and feeding entrance. 2).Clean rice exit and milling cabin, dry paddy
6. High percentage of broken rice or paddy in rice.	1).Paddy isn't dry. 2).High or low pressure at the rice exit. 3).The main shaft is offcenter, The gaps between the iron roller and sieve frame aren't equal.	1). Dry paddy. 2). Adjust pressure. 3). Adjust machine base to make the gaps equal.
7. High temperature for rice	1). Machine obstructed. 2). High pressure in rice milling cabin. 3) Wind weak in the main shaft. 4). Paddy isn't dry.	1). Clean rice exit and milling cabin, dry paddy 2). Decrease pressure on the rice exit. 3). Regulate the blower valve to make wind stronger. 4). Dry paddy.

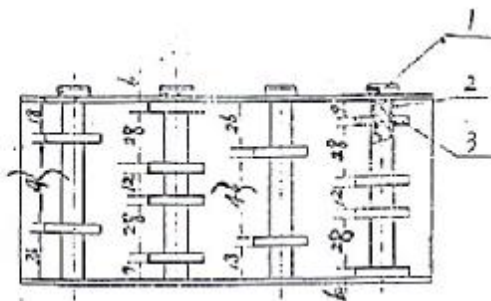
Trouble	Diagnosis	Disposal
8. The main shaft blocked	1). Feeding too much. 2). High pressure.	1). Turn off, then turn and clean the main shaft. 2). Adjust pressure with hand wheel.
9. Rice in chaff.	1). Sieve sheets break. 2). Strong wind by chaff absorbing blower.	1). Replace. 2). Adjust the blower with hand wheel.
10. Chaff in rice	1). Feeding too much 2). Weak wind by chaff absorbing blower.	1). Decrease feeding flow. 2). Adjust the blower with hand wheel.
11. Sieve frame doesn't work.	1). Gears break. 2). Gears stacked with much chaff. 3). Belt loosening.	1). Replace and add grease. 2). Clean out chaff. 3). Add grease.
12. Bearings break down	Chaff entering into bearings, oil seal or nylon cushion damaged.	1). Replace the broken bearings. 2). Replace nylon cushion, oil seal. 3). Add grease.

### Part 7. Parts of machine



No.	Parts Name	Quan.	No.	Pats Name	Quan.
1.	Grinder Wheel	1	17.	Sieve frame	1
2.	High pressure blower	1	18.	Layer	6
3.	Bearing base	1	19.	Iron roller	1
4.	Blower valve	1	20.	Exit supporting circle	1
5.	Tightening bushing	2	21.	Core	1
6.	Bearing	2	22.	Skeleton	1
7.	Nut	2	23.	Rice collector	1
8.	Bearing cap	2	24.	Chaff collector	1
9.	Big belt wheel	1	25.	Grinding blower	1
10.	Main shaft	1	26.	Basal stump	1
11.	Oil seal	2	27.	Ground screw	4
12.	Nylon cushion	1	28.	Dust collector	1
13.	Feeding plate	1	29-1	"V" type belt 1092	4
14.	Feeder	1	29-2	"V" type belt 1118	1
15.	Screw propeller	1	29-3	"V" type belt 4445	3
16.	Sieve sheet	6	29-4	"V" type belt 4572	3

### Part 8. Grinding System



1. Pin

2. Pin sleeve

3. Blade



**NPFXX Double Blowers & Fine Chaff Rice Mill**

**A parking List**

<b>N0.</b>	<b>Parts Name</b>	<b>Quan</b>	<b>Notes</b>
1.	Main machine	1	NPFxx
2.	Blade	1 2	
3.	Iron roller	1	
4.	Sieve frame	1	
5.	Screw propeller	1	
6.	Layer	6	
7.	Sieve sheet	6	
8.	Ground screw	4	
9.	Belt wheel	1	
10.	A set of tools	1	
11.	A bag of tightening parts	1	
12.	User's manual	1	
13.	Griding sieve	1	
14.	Parking list	1	