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JFP Capsule Sorting polisher

OPERATION INSTRUCTION



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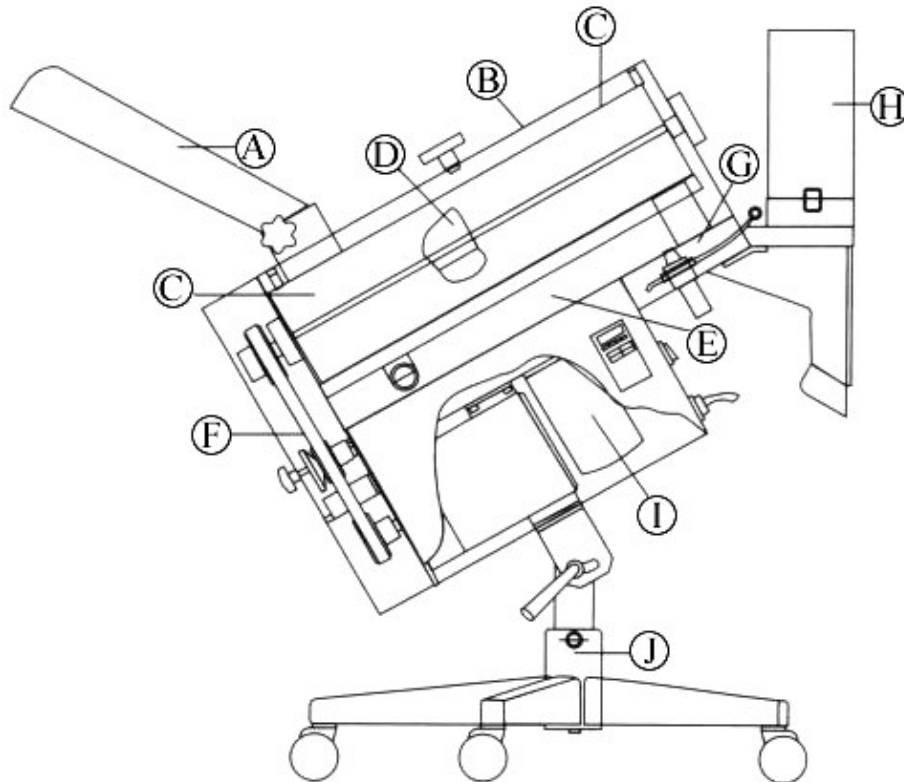
Packing list

Certificate of fitness

Main functions

JFP series is the capsule polishing device of sorting function and it not only polish capsules and eliminates their static electrical charges, but also rejects the slight-light, empty, broken or cap-separated capsules. It is suitable for all types of capsule without need of replacing molds.

Main structure and performances



□.Main structure:

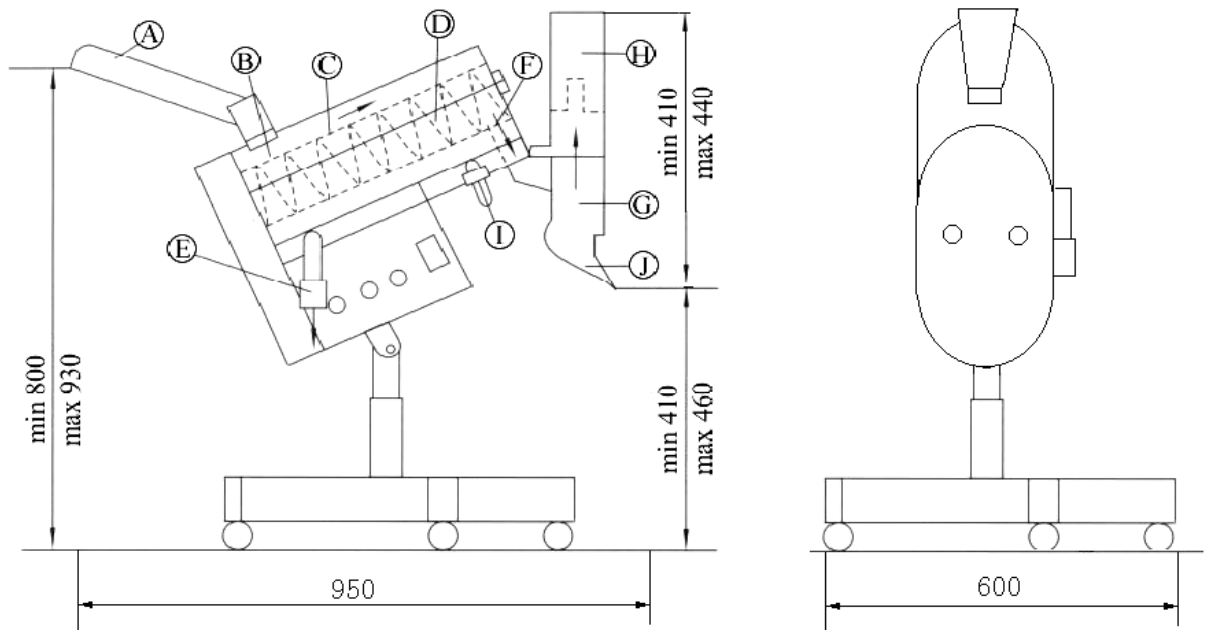
- | | | |
|-------------------|-----------------------|---------------------------|
| A. Hopper system | B. Upper cover system | C. Screen-cylinder system |
| D. Spindle system | E. Lower chute system | F. Driving system |
| G. Frame system | H. Sorting system | I. Electrical system |
| J. Base system | | |

It is made of stainless steel and has excellent performances. The brush on screen-cylinder is connected through a fast card-type mode and is easy in assemble and disassembly and complete in cleaning. The motor speed is controlled with a converter and the motor is able to withstand large start torque and keeps at steady and reliable running. The base may be fixed with rotary roller to ensure free movement. The machine is simple and reliable in operation, high in efficiency and polishing cleanness, and complete in eliminating rejects.

Main technical parameters

Model Parameter	Model JFP-110	Model JFP-110A
Power supply	220V/50HZ	220V/50HZ
Power	180W	180W
Productivity	3000capsules/min	6000capsules/min
Vacuum dust collection	2.7m ³ /min - 0.014MPa	2.7m ³ /min -0.014MPa
Compressed air (Provided by the user)	0.25m ³ /min 0.3MPa	0.25m ³ /min 0.3MPa
Outside dimensions	820×600×950mm	1000×600×950mm
Weight	39kg	43kg

Working principle



□.The capsule-filler conveys the filled capsules to the inlet of oblique chute of polisher ①.

II. The rotating brush conveys the capsule from inlet ② to screen cylinder③.

III. In the screen cylinder ④the brush polishes the capsule surface and removes dust and meanwhile recovers the dropped materials due to cap-lack or cap-separation through vacuum suction port⑤.

IV. The brush feeds the capsules to outlet of the screen cylinder ⑥.

□.In sorting unit ⑦, the slight-light, empty, broken or cap-separated capsules are collected to receiver ⑧ through clean compressed air.

□.The pressure of compressed air is displayed in pressure gauge ⑨ in filtering relief valve and is adjustable according to requirements.

□.The qualified capsules are discharged from outlet ⑩.

Product features

The oblique chute loading mechanism gets preparations for in-line operation with full-automatic filler. It can realize automation from preparation to finished capsule, reduces operators' contact with drug and their working volume, and completely conforms to GMP.



Hopper is a standby device. In consideration of the fact that the productivity of a single set of capsule sorting polisher is much higher than that of a single set of filler, the stand-by hopper is used to meet the requirements of several sets of filler and one set of capsule sorting polisher.



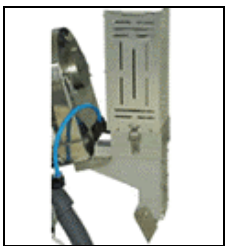
After removing two star-shaped handles and rear guard of the synchronous belt, one may find the tensioning mechanism and limit switch of the synchronous belt.



Due to long-term running, wearing-out or stretching the synchronous belt would become rather loose. At this case, loosen the knurled

rather loose. At this case, loosen the knurled adjustment handle and rightwards horizontally move the tensioning mechanism to adjust the tension. After adjustment, retighten the handle. Take care not to make the synchronous belt excessively tensioned.

Before replacing the rear guard of synchronous belt. The limit switch is at normal state. At that time, pressing the start key will not start the main motor, which is not a trouble. After replacing the rear guard and tightening two star-shaped handles. The limit switch is at N.C state. At that time, the machine is able to start.



The sorting unit is a precise mechanism and disassembly or assembly of the sorting head without technician's guidance is not allowed. The rejected capsule receiver is separated with an organic glass plate. The sorting head is connected with rejected capsule receiver through lapped fasteners, which is easy in disassembly and washing.



The requirements on polishing different capsules may be met through replacing brushes of different specifications. A spare brush is accompanied with the machine.

The screen cylinder consists of 316 stainless steel cylinder and spring wires. No drug will accumulate inside the cylinder and the powder is removed by the dust collector through the screen-meshes.



For washing screen cylinder, take out the spring wire from the screen cylinder.

At assembly of spring wire and screen cylinder, at the inlet and the outlet no passage of edge sandwiched less than a capsule length shall be allowed. The spring wire shall be arranged at an equal interval.

The motor speed is controlled with a converter and the motor is able to withstand large start torque and keeps at steady and reliable running. For operation and presetting of parameters, please refer to operation instruction of the converter.



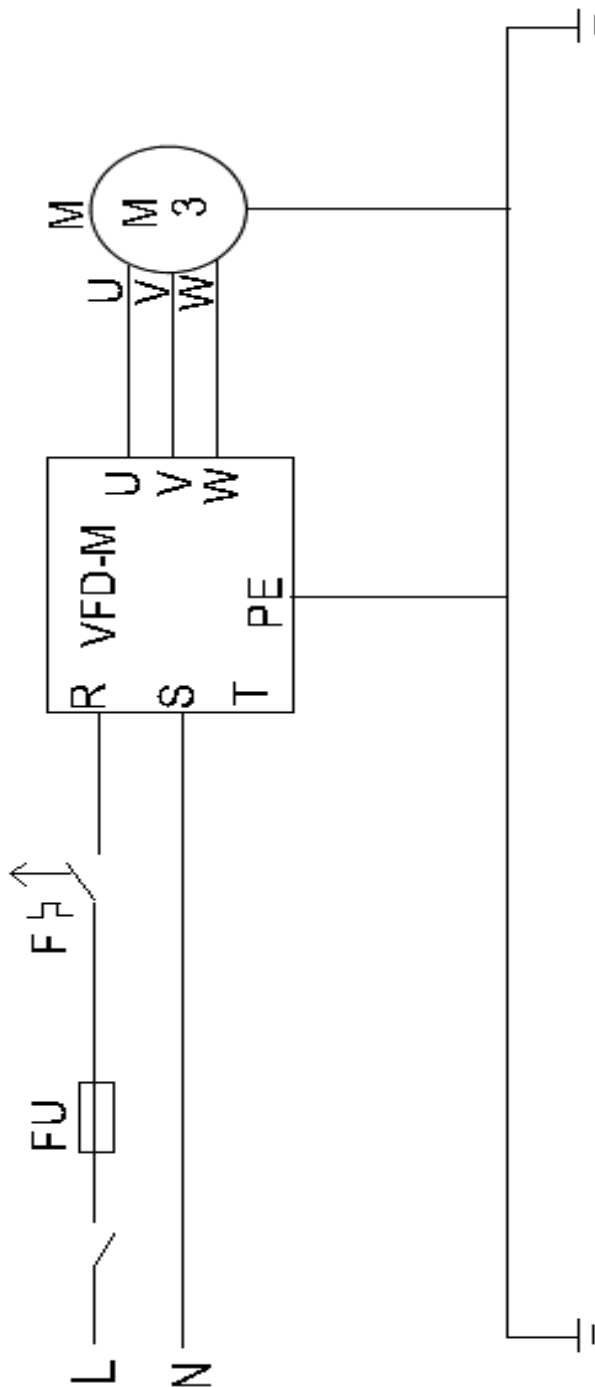
The requirements on sorting capsules of different specifications may be met through adjusting the filtering relief valve. The larger the capsule size, the higher the pressure of compressed air.



Generally, the pressure of compressed air is 2.5-3kg/cm².



The base is fixed with 5 all over-rotary rollers to make movement free and operation easy in the entire level plane.



电器原理图

SCHEMATIC ELECTRICAL DIAGRAM

Operation process

□. Power supply

1. It uses single-phase 220V AC power supply.
2. Three-pin socket shall be used, one of which shall be well grounded.
3. The neutral wire shall not be used as earth wire.

□. Start procedures

- a) Insert three-pin plug and turn on power switch. At that time the indication lamp on operation panel lights on, which denotes normal power-on.

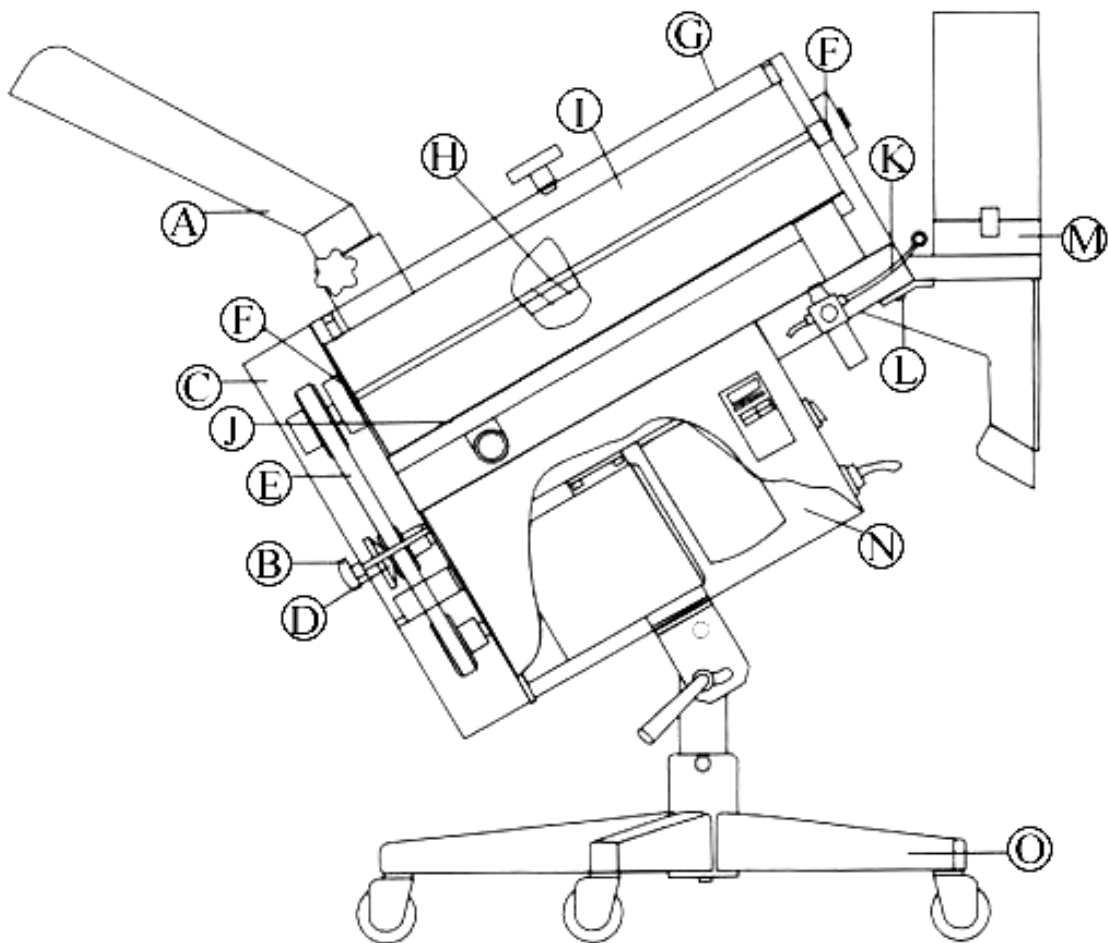
2. After pressing key

RUN, indication lamp **RUN** lights on and **STOP** flashes, main motor rotates and the figure shown in the display window gradually increases from 0 to the preset one.

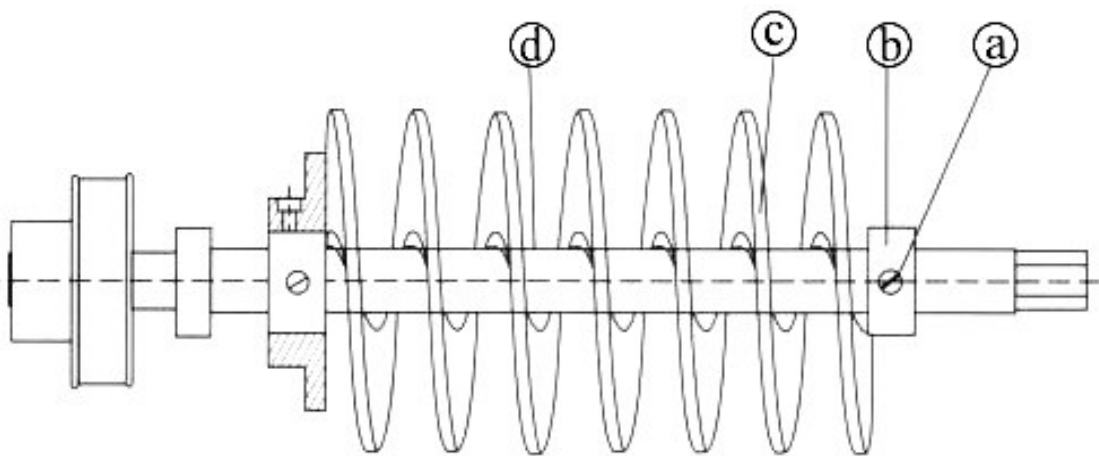


3. Connection compressed air. Mix a few of empty and finished capsules and put them into the polisher inlet and at the outlet observe the capsule-sorting by compressed air. Adjust the pressure at 2.5-3kg/cm² through rotating the knob of the filtering relief valve to make empty capsules completely collect and finished ones smoothly discharge.
4. Connect the adaptor of dust collector with the suction of equipment and start dust collector and main machine to make normal production.
5. After production, cut off compressed air, press key STOP on operation panel. Switch off the power and withdraw the three-pin plug.

Cleaning procedures

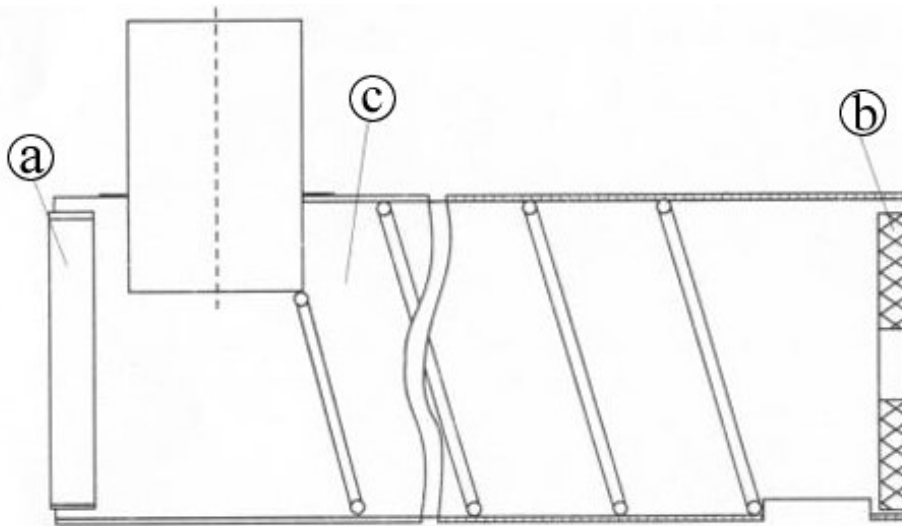


- I. Wipe the machine body **(N)**, base **(O)** and driving parts in the belt guard with clear water- or alcohol-soaked gauze.
- II. Clean the inlet oblique chute **(A)**, belt guard **(C)**, upper cover **(G)** and lower chute **(J)** with clear water or alcohol.
- II. Remove the bearings (hexagonal inner hole) at right side of screen cylinder box **(I)** and the spindle **(H)**, leftwards pull out spindle assembly **(H)**, loosen top screw, and take out the sleeve **(b)** and brush **(c)**.



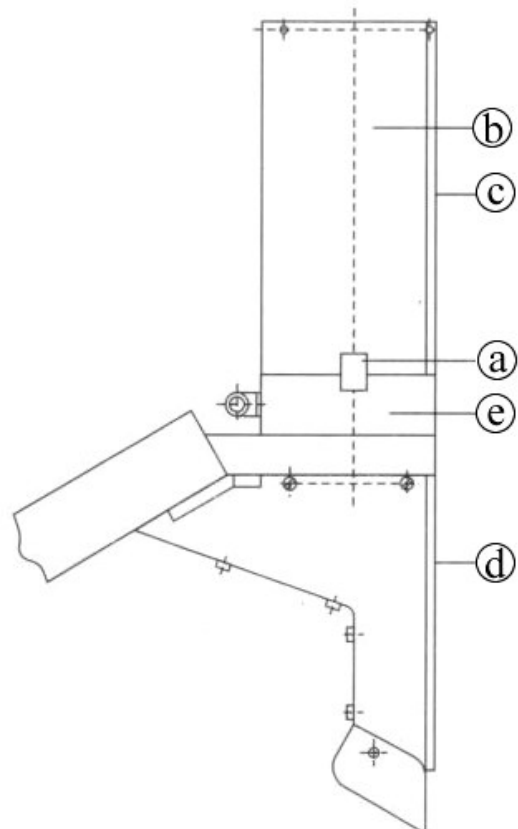
- A. Wipe two bearings on the spindle with dry cloth and then coat anti-rust oil.
- B. Wipe the spindle **(d)** with clear water- or alcohol-soaked gauze.
- C. Clean the sleeve **(b)** and brush **(c)** with clear water or alcohol, or blow-dry the brush with compressed air.

IV. Remove left plug cover **(a)** and right plug cover **(b)** from the screen cylinder assembly **(I)**, clean the cover **(a)**, **(b)** and screen cylinder **(c)** with clear water or alcohol, or blow-dry the screen cylinder **(c)** with compressed air.



Notes:

1. At assembly of left plug plate **(a)** and right plug plate **(b)** on the screen cylinder after cleaning, the front of both plates shall be pressed into the screen cylinder and the outer edges of their steps shall be flushed with the cylinder mouth.



2. In the screen cylinder
the spring wires shall
be arranged at an
equal interval. At the
inlet and the outlet no
passage of edge
sandwiched less than
a capsule length shall
be allowed.
 3. Open the lap fastener **(a)**
in sorting unit, take out
receiver **(b)**, open organic
glass plate **(c)**, remove
collected matters, and
wash all parts with clear
water.
- VI. Operation and maintenance of filtering relief valve
- A. For adjusting pressure, first pull out the knob
and then rightwards or leftwards rotate it to
increase or decrease pressure. After adjustment,
push the knob again.
 - B. At least drain once every shift and keep the
water level not above the lateral mark on the water
cup.
 - C. Washing the water cup with neutral detergent,
then wash it with clear water, and finally air-dry it.
 - D. For washing filter core, remove the rod through
heavily leftwards rotating it.

VII. After washing and air-drying of all parts, make assembly in the reserved sequences of disassembly and then put the machine into operation.

Troubleshooting

- . No display on the operation panel after turning on the power switch.
 1. Check fuses for good conditions.
 2. Open pulley guard, press the travel switch, turn on power and check for display on the operation panel. Display in the panel means that the pulley guard is not well positioned.
 3. In case of still no display in operation panel. Check the travel switch for good conditions.

II. In spite of display on the operation panel, the main motor is unable to start.

1. Check whether the digit shown in the display window of operation panel is 0. In case of 0, adjust the digit to 15-20 and then press key

RUN.

2. Open the rear pulley guard and check the belt for proper tension, or adjust the tensioning mechanism.



III. During sorting polishing, the empty capsules are not completely rejected or the finished capsules are rejected.

1. In case of incomplete rejection of empty capsules, increase the pressure of the adjustment valve, which for general sorting is ca. 2.5-3kg/cm².

2. In case of rejection of finished capsule, decrease the pressure of the adjustment valve, lower the speed of main motor and increase the angle of the main machine. The inclination angle of the main machine with level shall not be excessively large (generally 15 degree) and the sorting unit shall be vertical to the ground, which shall be well adjusted.