

OPERATION MANUAL

The CF series hammer mill is the new design. It is mainly used in the farms, middle sized feeding factory or for family use. The characters of the hammer mill focus on: Simple construction, convenient operation, high efficiency, saving power consumption, and safe condition. It is fitting to grind the maize, straw, dry grass, branches and bark etc.

*STRUCTURE AND WORKING PRINCIPLES

1, The hammer mill consists of three parts on the whole: feed hopper, grinding cell, winding system.

2. Production flow

The raw material flows into the grinding cell by feeding hopper, and then is grinded to powder by rotary flake – hammers' hitting.

The rough powder and fine powder all fly to the screen. Because of centrifugal force and wind force, the fine powder passed through the screen and comes to the product's container. The rough powder is continuously to be grinded till it becomes fine.

3. The fan needn't be used when grinding green feed for CF158 and CF198. The production will flow out smoothly by itself. The fan needn't be used either when grinding the dense feed.

* KEY PARAMETERS

Model	CF158	CF198	CF420	CF500
Main shaft's speed (RPM)	3400	3400	3200	2700
Width of the milling chamber	158mm	198mm	275mm	395mm
Array of hammer flake	Odd head symmetry	Odd head symmetry	Odd head symmetry	Odd head symmetry
Quantity of hammer flake	12 pcs	16 pcs	16 pcs	24 pcs
Distance of sieve and hammer	5-8 mm	5-8 mm	5-8 mm	5-8 mm
Sieve pore diameter (mm)	3, 4, 7	2, 4	4, 6	4, 6
The angle of the screen	180°	270°	180°	180°
Blower type	Centrifugal blower	Centrifugal blower	Centrifugal blower	Centrifugal blower
Matching power	2.2KW, 2800RPM	4KW, 2800RPM 7.5HP	7.5-11KW, 2800RPM 15-22HP	22KW, 2800RPM 55HP

*FIXATION, USAGE, ADJUSTMENT AND SAFETY RULES

1. The hammer mill may powered with 2 electrodes motor that is driven. The pulley of the grinder must be adjusted to the motor pulley. The grinder and motor must be fixed on strong base together; the belts must keep proper tense. And if you push the middle part of the pulley with fingers, it is about 10-20mm lower. For the dry feed, the ready pellets can be send by the blower to the to 6-8M cloth bag; for the dry grass, you can open the lower outlet to let the pellets leak out, in order to collect the pellets, you should dig a hole in the ground or place the machine at higher place.
2. Continuously keep it rotary 2 to 3 minutes to eliminate surplus feed in the grinding cell after finishing work.
3. The screen controls the size of output. And there are screen with diameter. Other sizes also can be offered as per your request. Remove the upper cover before you replace the screen.
4. The starter for motor should be placed near to the machine and be sure not to use the fuse bigger than the rating electric current.
5. For the new machine, you should process the dry draw initially to clean out the dust.

***SAFETY RULES**

1. Total check must be given before starting, the circuit is right or not, if there are collision and wear when turning with hands, and whether the bolt is fixed or not.
2. Then start running 3-6 minutes no load. Clean the inner surface with straw before operating.
3. Place the ready material on the clean place, be sure not mix the metal and stone in it in order not to damage the machine. The raw feed must be pure.
4. The operator must dress neatly, stand beside the feed-hopper. Hands are forbidden into protective plate after starting. Switch off the machine as soon as the no normal condition. Don't leave to prevent from other breakdowns happen after starting. Clean the remainders in the outlet in time to keep the low smoothly.
5. Fill water properly when making paste and the water can't be flowed out to the machine and the motor. And don't switch off or on with wet hand.
6. If there is some breakdowns, please clean the cell and try again. Starting is forbidden at loading.
7. If you don't use the blower to transmit the material, please dismantle the suction pipe of the fan, the suction inlet must be covered with the thick paper; if you don't use it for a long time, please dismantle the fan and keep it well.
8. You must use the motor and pulley from the factory and pulley from other factory is forbidden.
9. If you use the diesel engine, please order from the same factory of the diesel pulley.

*** COMMON BREAKDOWNS AND FIXING METHODS**

Troubles	Reasons	Methods
The machine vibrates seriously with loud noises	1. The machine is not installed firmly on the ground or the bolt is loose.	Install it firmly
	2. The main shaft is bent.	Mend or replace the shaft
	3. The rotors are not in the state of balance. The weight of the symmetry hammer is not same.	Adjust them in balance.
	4. The flake-hammers are not in correct order	Adjust the order correctly
	5. The bearing is born.	Clean and replace the bearing.
The productivity is low	1. The flake-hammers are worn seriously.	Turn over them and fix again, or replace them.
	2. The tooth-like plate is worn seriously.	Replace it.
	3. The raw feed is too big.	Cut it to small pcs.
The temperature of electric motor and bearing is over hot.	1. The raw feed is too wet	Dry them firstly
	2. The flow of the raw feed is too fast.	Control the flow properly
	3. The gaps are not correct between the bearings and bearing bases.	Make them correctly
	4. There is dirt in the bearings	Clean by petrol.
	5. The amount of the lubricating oil is not suitable.	Control the oil properly
	6. Speed is too high	Use with the suitable motor and pulley
	7. the bearing is worn	Replace bearing
The feed is out of wind inlet.	1. The feed flow is too fast or not equal	Control feeding speed
	2. The voltage and speed of motor is low	Regulate the speed of motor or feeding speed
	3. The transmit pipe is jammed	Dredge the pipe
	4. the wind inlet is too big or small	Regulate the wind inlet

***THE MAINTENANCE.**

1. When it working, you should smear the oil 1-2 oil ring every two hours.
2. The hammer flake is breakable parts. Every flake has two concussion parts. Every concussion part can mill 5000kgs, when one part is worn out, turn over to use the other part. When install the hammer flake, please keep their original position, and be sure the flakes on both side are equal weight.
3. The tooth-like plate should be replaced every 20-30 thousand kgs. If the metal damage it, please replace it in time, and when replace it, please open the upper tank, pay attention to fix the nut and bolt.
4. The screen should be replaced every 20-30 thousand KGS. If it is part-damaged, you can continuously to use it after mending it, or full damaged, you should replace a new one.
5. After working 500 hours, you should check and clean the bearing, open the tank, dismantle the blower pulley, take down the rotor and the bearing cover, then you can take down the bearing and clean it.
6. When not use the machine, clean the dust of cover, empty and clean it. After grinding the grass feed, you should grind some dry feed to keep the inner machine dry to prevent the rust.
7. Smear the anti-rust oil on the V-belt.