SWFL75.102 .128
VERTICAL-SHAFT PULVERIZER

OPERATION MANUAL

ZTMT
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Important instructions：

1 This manual detailedly describes SWFL75.102.128 series vertical shaft pulverizer of each system structure, function and use and maintenance method. Before installation and use of the machine , customer should read the manual,and have a full understanding of the ministries and its structure and function ,then have operation and maintenance of the machine. Due to the continuous improvement of product structure, after a certain time period, the manual of narrative content and the actual situation of the products will have small changes.Users should pay attention to it.

2 Please propose your advice to us for melioration when finding quality problem or others.Thanks !

1. GENERAL INTRODUCTION

1.1 MAIN USES AND APPLICABLE SCOPE

SWFL series pulverizers are widely used in the industries of feed, food, chemicals, medicine, etc. especially the feed industry. Pulverizer is one of the most important equipment for special feed mill. The pulverizing effect directly affects the quality, output and cost of compound feed. SWFL75, 102, 128 vertical-shaft pulverizers are suitable for large and medium sized feed mills, especially for pulverizing the raw materials of shrimp feed, eel feed, turtle feed and immature animal feed.

1.2 MAIN PERFORMANCE AND FEATURES

Compared with previous pulverizers, this machine has the following advantages:

(1) It's compact in structure with a built-in centrifugal airflow separator and it takes a small area;

(2) The finemess of finished products can be willfully controlled according to the requirements of users's production.

(3) The screen-passing rate is high up to 99.9%

(4) Air sizing, Air conveying, Low rising of products temperature.

(5) Gear ring has big diameter and more working teeth, resulting in high pulverizing efficiency.

(6) Gear ring and cutter blade are made of high quality carbide, resulting in long service life.

(7) Main bearing adopts the circulating water-cooling system, resulting in low rising of main bearing temperature and long service life.

(8) The worm and wormwheel cover-lifting device results in convenient and quick repair..

This machine adopts stepless speed-adjusting motor for spiral feeding at an even rate so that users can find a best feeding speed conveniently according to different materials to be pulverizing.

1.3 Model and its implication

S WF L 75

Spec.：Rotor dia. of pulverizer:750mm

Model code:Vertical

Variety code：Pulverizer

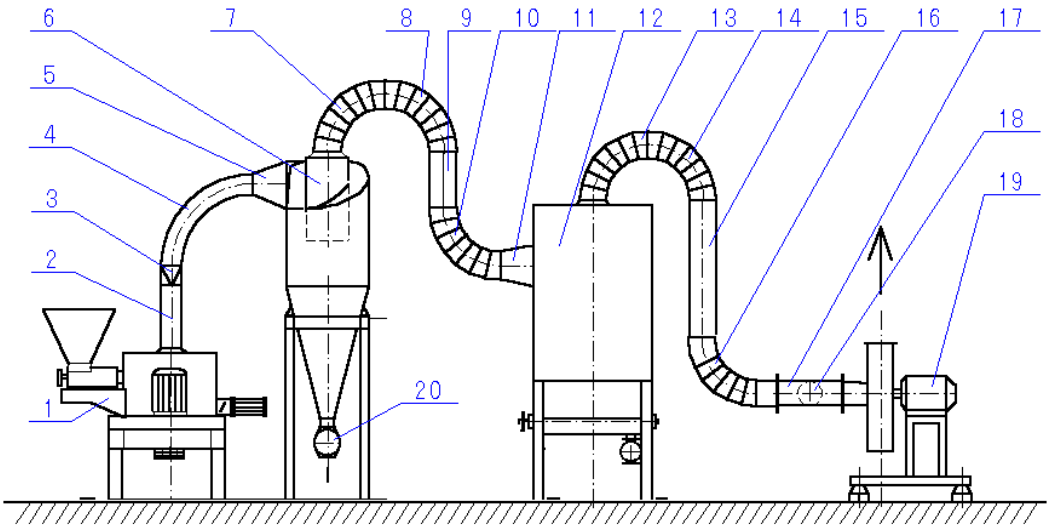
Professional code：feed machinery

1.4 OPERATION CONDITIONS

The following conditions must be accorded with when using this machine:

1.4.1 Pulverizer should be installed in basement or on the ground floor with room temperature between 5℃ and 40℃.

1.4.2 The necessary equipment before and after the pulverizer should fit each other technologically. (see Figure1)



1. main machine 6. discharger 12. pulse filter 18. Butterfly valve 1 high press ion fan 20. air lock

others are air pipes and elbows

Technical request: 1.flange connect should have asbestine mat. Spread sealed glue. All pipes sure be sealed.

2. All transitions should keep balance. Not more than 15 degree.

3. Level pipes, upright pipes are not too long. That should ensure can pass person and truck.

3. This flow chart is only reference. You can according to the instance to adjust the flow chart.

Fig.1 SWFL Vertical Pulverizer Process flow

1.4.3 The working voltage should be stable with a tolerance of ±5%. The rated working current of pulverizer is 89.9A, 140A, 201A, 241A, 291A.

1.4.4 The diameter of material should be less than 1mm before it enters the machine, and moisture content less than 12.5%. (See 2.2 for details).

2. MAIN PERFORMANCE INDEXES AND TECHNICAL SPECIFICATION

2.1 BASIC PARAMETERS (See Table1)

Table 1

Model	Rotor Dia. (mm)	Rotational Speed of Rotor (rpm)	Rotational Speed of Separator Impeller(rmp)	Power of Main Motor (kw)	Power of Separator Motor (kw)	Power of Feeder Motor(kw)	Overall Dimension LXWXH (mm)
SWFL 75	750	2598	312-3120	45	5.5	0.75	2660×1950×1600
SWFL 102	1020	1878	240-2400	75;90	7.5	0.75	2860×2665×1901
SWFL 128	1280	1572	120-1200	110;132;160	15	2.2	3200×3266×2124

2.2 MAIN PER5FORMASNCE INDEXES

Under normal conditions, when raw materials entering the machine is the qualified imported second class fish meal or raw materials for shrimp (The main ingredients are : fish meal 30%, bean dregs 15%, meat and bone meal ＜ 15%, shrimp shell meal≥8%, miscellaneous dregs ＜ 15%,meal≥20%, additive3-5%= or raw materials for eel (The main ingredients are: white fish meal ≥55%, yeast≥5%, a-starch 20%, bean

dregs 4-10%, additive and others 10-15%), the main technical performance indexes meet the requirements in table2:

Table 2

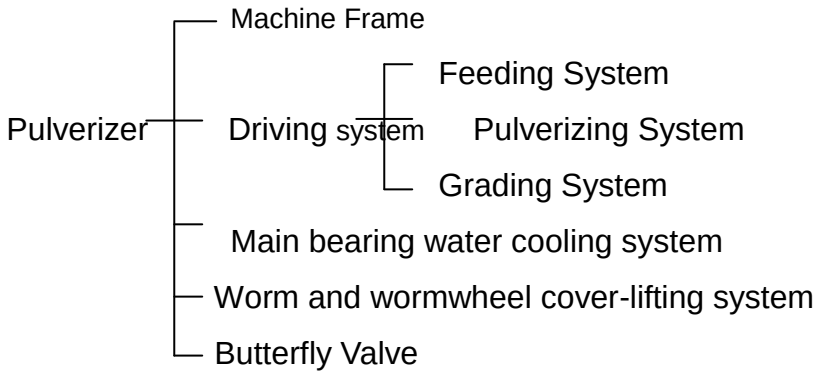
Item / Model		SWFL 75	SWFL102		SWFL128		
		45kW	75 kW	90 kW	45kW	75 kW	90 kW
Capacity (kg/h)	Fish Meal 95% through 80 mesh	600	1200	1500	1800	2100	2700
	Raw Materials for Shrimp 90% through 80 mesh	520	1050	1300	1600	1900	2500
	Raw Materials for Eel 95%through 80 mesh	600	1200	1500	1800	2100	2700
Power Consumption (kw.h/t)	Fish Meal 95% through 80 mesh	≤80	≤70	≤65	≤65	≤65	≤60
	Raw Materials for Shrimp 90% through80 mesh	≤90	≤75	≤75	≤75	≤75	≤70

	Raw Materials for Eel 95% through 80 mesh	≤80	≤70	≤65	≤65	≤65	≤60
Noise [dB(A)]			≤97	≤97	≤97	≤97	≤97

3.MAIN STRUCTURE AND WORKING PRINCIPLE

3.1 MAIN STRUCTURE

This machine consists of machine frame welded with channel iron, driving system and butterfly valve, etc.



3.2 WORKING PRINCIPLE

3.2.1 PULVERIZING PROCESS

When this machine starts to work, the materials (diameter not more than 1mm) are evenly fed to the pulverizing chamber at proper flow rate by stepless variable motor through the driving of belt or chain Materials in the pulverizing chamber are forced by air to suspend and receive the high-speed impact by cutter blade. The broken small particles fly at high speed to the toothed plate and impact the toothed plate once again, thus the small particles are broken further. At the same time, mutual friction and impact occur between materials and parts in the pulverizing chamber and

between materials, thus obtaining micro particles. Then micro particles are sized by the sizing vane through air absorption of fan. The qualified products enter cyclone and pulse filter for reclaimation. The coarse particles continue to be pulverized until being qualified.

3.2.2 PULVERIZING PRINCIPLE

The working principle for pulverizing the materials are as follows:

The precleaned and magnetically separated materials enter the pulverizing chamber through feeder screw and are impacted to break by fast rotating cutter blades. And it flies to gear ring at a high speed. As the gap between the cutter blades and the gear ring is very small, the airflow pressure between the cutter blades and gear ring alternates with the instantaneous changing of circulation section. Therefore, alternative stress comes into being at the cracked top of the material. Material is pulverized under such repeated actions. The pulverized materials follow the airflow from the bottom to rise along the guide ring to the sizing section and to be sized depending on the balance between centrifugal force of the separator and centripetal force of the airflow absorbed. The qualified powder is absorbed out of the machine while the coarse powder returns to the pulverizing chamber to be repulverized. Thereby, it can avoid excessive pulverizing and obtain an ideal fineness of powder. In addition, the fineness of the finished products can be adjusted simply by changing the rotational speed of the separator while keeping the airflow.

3.3 STRUCTURE OF PARTS

3.3.1 FRAME(See Figure 2)

The frame is made by welding channel iron and motor base. It is used to support the main part of the machine and all motors and has good rigidity and stability.

3.3.2 DRIVING SYSTEM (See Figure2)

The driving system consists of feeder, pulverizing system, sizing system, etc.

3.3.2.1 FEEDER (See Figure 2)

It consists of screw, motor and shell.

3.3.2.2 PULVERIZING SYSTEM (See Figure 3,4)

This system is made of axes,cutter disc. ,blade and liner plate which is the core of the pulverizer,whose quality determine the performance of the pulverizer. The cutter blade and liner plate should be welded with a carbide blade.

3.32.3 Grading System (See Figure 3, 4.)

This system is made up by shaft (43) and air wheel, it is one of innermost parts. It decides the quality of the products' size..

3.3.3 Water-cooling system for Main Shaft

This system is main use for cooling the main shaft and improve the life of the main shaft.

3.3.4 Worm wheel and worm opening device.

This device is used for opening or closing the upper shell when you maintain.

3.3.5 Butterfly Valve (See Figure 5)

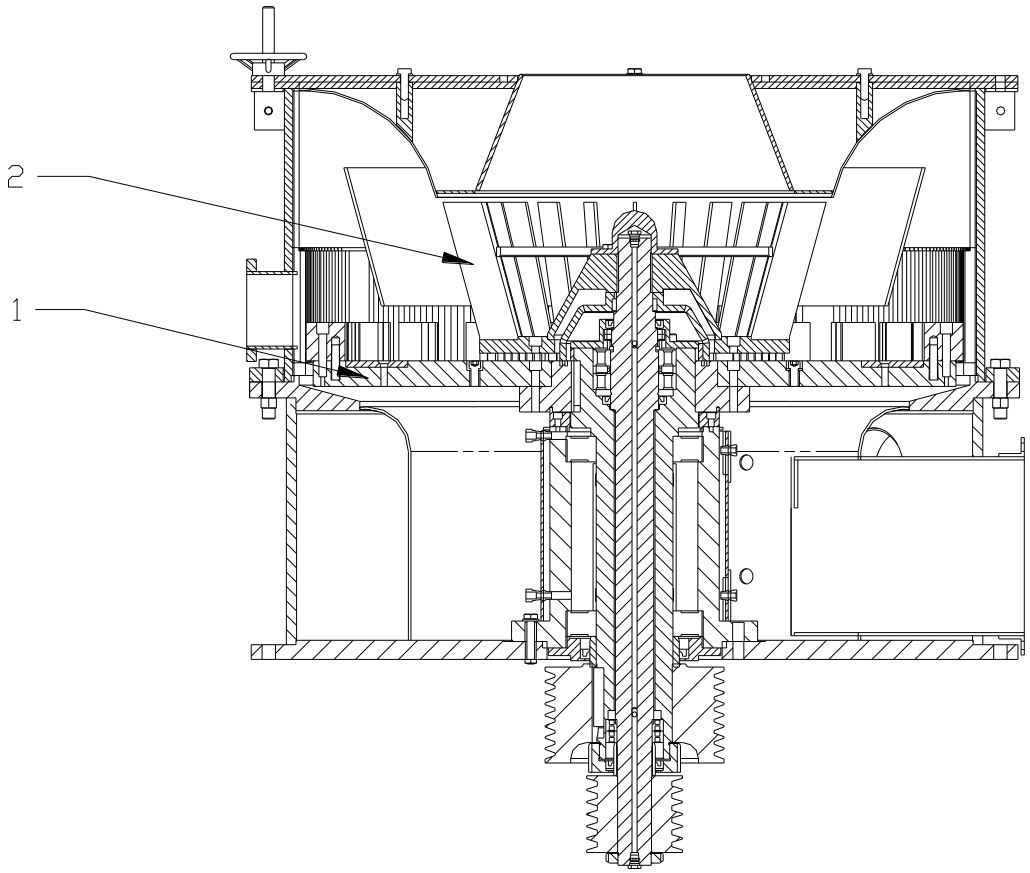
Butterfly valve is used to control the air quantity.

1. Frame 2. Driving system 3. Feeder

Code / Model Size	A	B	C	D	E	F	G	H	I	J	
SWFL75	347.5	1052.5	912	2660	338.6	1600	880	4-φ23	φ380	φ320	
SWFL102	564	1100	900	2860	360	1901	1120	4-φ26	φ410	φ340	
SWFL128	688	1000	1000	3120	320	2124	1418	4-φ26	φ410	φ340	
	K	L	M	N	O	P	Q	R	S	T	W

SWFL75	4-M12	1950	240	3×100	150	200	8-φ17	1025	1265	150	≥870
SWFL102	8-M12	2665	320	3×120	170	220	8-φ17	1157	1544	174	≥112
SWFL128	8-M12	3266	390	3×150	314	374	8-φ17	1460	1960	190	≥138

Figure 2 SWFL75, 102, 128 VERTICAL-SHAFT PULVERIZER Sample Chart



1. Girding system 2.Grading system

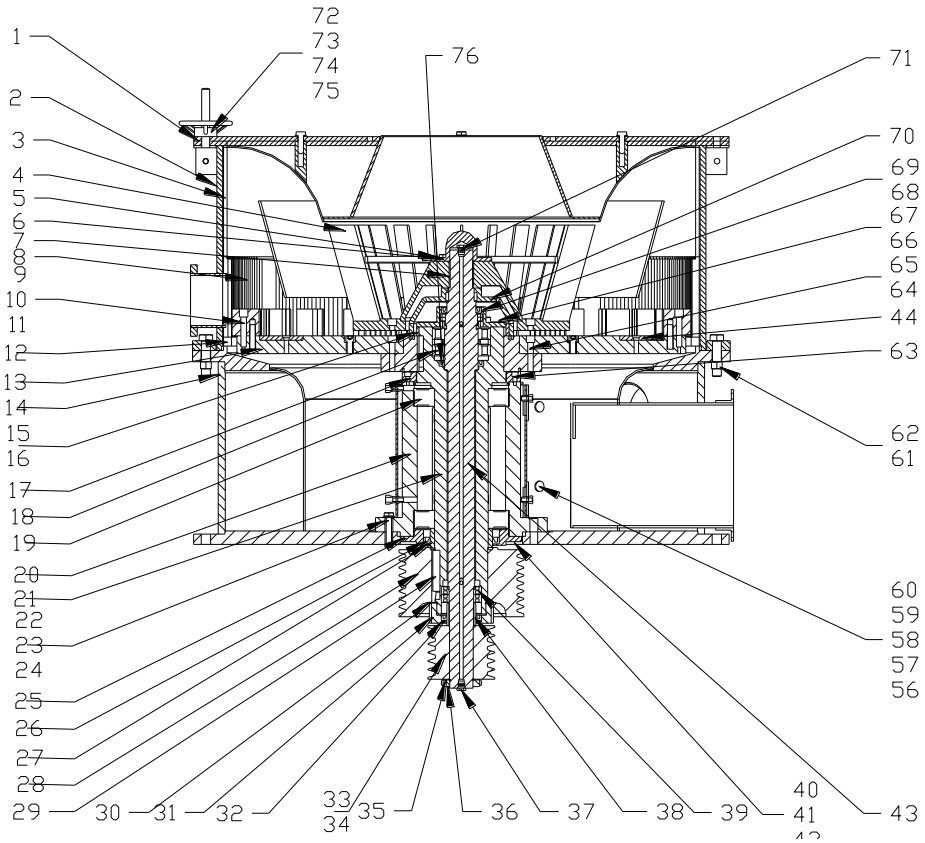


Figure 3 Structure Chart

表四: Table 4

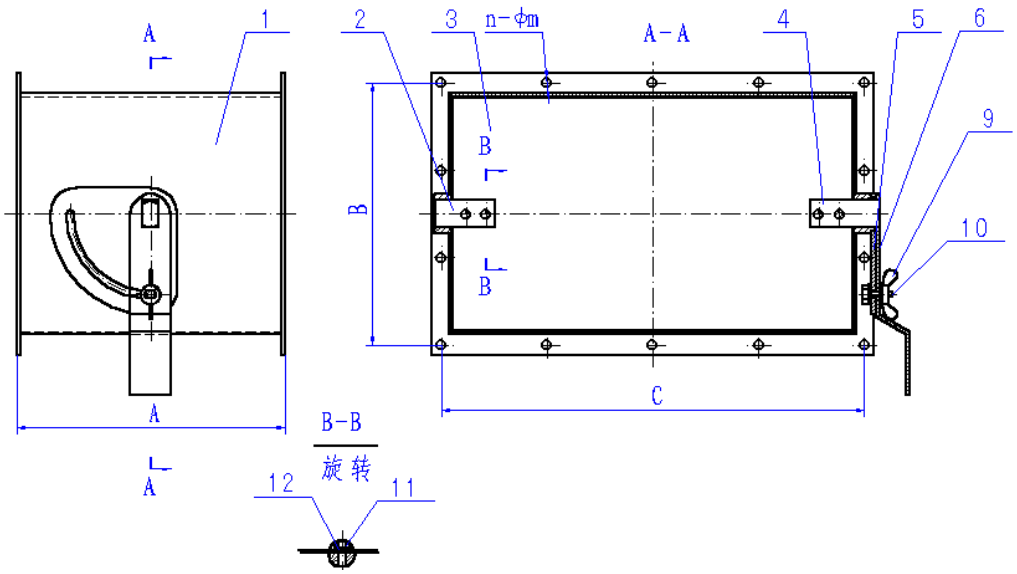
No.	Name	Qty.	No.	Name	Qty.	No.	Name	Qty,
1	Upper Shell	1	16	Fixing distance Ring	1	31	Shell	1
2	Grading Chamber	1	17	Bearing	2	36	Nut	1
3	Guide Ring	1	18	Sealed Ring	1	37	Oil mouth	1
4	Air Wheel	1	19	Bearing	2	38	Fixing distance ring	1
5	Bolt	6	20	axle sleev	1	66	Nut	2

				e Bushing				
6	Close Nut	1	21	Shaft	1	67	Bolt	4
7	Key	1	22	Bolt	12	68	Shell	1
8	Lining plate	1	23	Nut	12	69	Oil envelop	1
9	Inside six angles bolt	24	24	Spring washer	12	70	Sealed ring	1
10	Spring washer	24	25	Shell	1	71	Oil cup	1
11	Knife	24	26	Oil envelop	1	72	Opening Pin	2

续表四:Table 4

No.	Name	Qty.	No.	Name	Qty.	No.	Name	Qty,
12	Screw cover	1	27	Fixing distance ring	1	73	Pin	2
13	Cutter disc	1	28	Belt Ring	1	74	Shank	2
14	Shell	1	29	Key	1	75	Hand wheel	2
15	Key	1	30	prevent moving ring	1	76	Oil envelop	1

Note: The table's size is SWFL75



	A	B	C	n	Φm
SWFL75	240	2×120（=240）	100+115+115+100	12	Φ11
SWFL102	320	105+100+105（=310）	135+130+130+135	14	Φ13
SWFL128	400	3×130（=390）	4×157.5（=630）	14	Φ13

Fig. Butterfly valve

4. INSTATALLATION, ADJUSTMENT AND TRIAL RUN

4.1 INSTALLATION

4.1.1 Usually, this machine is delivered in one body and can be installed directly. Generally, this machine is positioned and installed in basement or on the ground floor to avoid the noise developed by this machine when it is running. And it should be kept apart. The installation site should be firm and spacious with an excellent and anti-vibration foundation. After finishing the construction of the foundation, place the pulverizer on its designed position and adjust its level and keep it within 0.3%. Put a 5-8mm rubber plate under the frame pad and fasten the foundation bolts evenly at the same time. See Figure 6.

No.	A	B	C	D	E	F
SWFL75	1964	2400	880	1280	4-110×110	450
SWFL102	2000	2400	1120	1520	4-110×110	450
SWFL128	2000	2400	1418	1920	4-110×110	450
	G	I	J	n	Φm	
SWFL75	600	50	45	4	GB799-88	M20×500
SWFL102	600	50	45	4	GB799-88	M24×500
SWFL128	600	50	45	4	GB799-88	M24×500

FIGURE 6 FOUNDATION

4.1.2 To ensure the continuous and safe production, a magnetic separator must be mounted before the feeder！！！

4.2 ADJUSYMENT

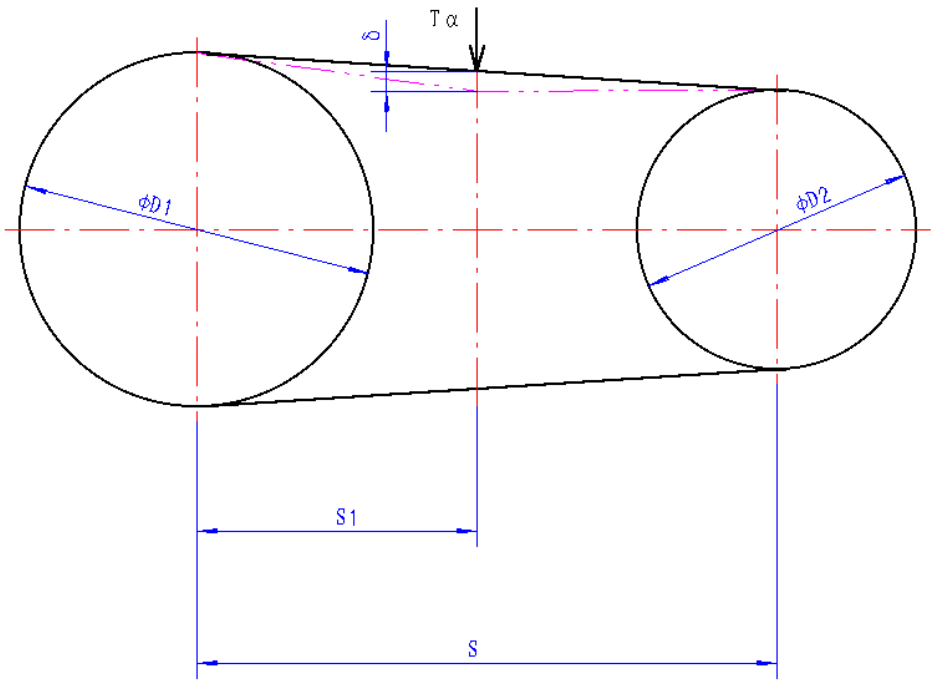
4.2.1 See Figure 7 for the electric control principle. This figure is only for

reference.

4.2.2 ADJUSTMENT OF ROTATIONAL SPEED OF FEEDER AND SEPARATOR

After installing the pulvertuzer, adjust the output rotational speed of the motor in accordance with instruction of the Manual for TDEA Electromagnetic Speed-adjusting Motor Controller in order that the indicating data on the speed gauge is the same as the actual rotational speed.

4.2.3 Adjust the degree of tightness of the main driving belt, sizing driving belt and the driving belt of the feeder motor. See Figure 8.



No.	ΦD_1	ΦD_2	S	S_1	δ	Tα	
						New tape	Runnning tape
SWFL75	303	265	1052.5	526.25	1.6	104N/pc	90.2N/pc
SWFL102	355	280	1279	639.5	1.6	104N/pc	90.2N/pc
SWFL128	425	400	1258	629	1.6	121.6N/pc	105.9N/pc

FIGURE8 SKETCH DIAGRAM FOR THE PRETENSION OF NARROW 5V BELT

Grading transmission belt:

Pretensions are 33N/pc, 33N/pc and 45N/pc separately.

Feeder driving belt need not be adjusted accurately

4.2.4 The center lines of two pulleys must be parallel. Each V belt must be perpendicular to the centerline of pulley after being mounted.

4.2.5 Connect the circulating cooling water cooling system.

4.2.6 Start by a quick touch all motors to see if the rotation direction is right.

4.2.7 Close the butterfly valve.

4.3 TRIAL RUN

After installing the machine, make a trial run firstly according to the following steps:

4.3.1 COMMISSION THE MAIN PART OF MACHINE FIRSTLY AS FOLLOWS:

a. Check that all the fasteners are screwed tightly before fixing the cover.

b. Check that there are no foreign materials entering the housing. If any, remove it in time, otherwise it will damage the grinding wheel, separator, gear ring, cutter blade, etc. so, full attention should be paid.

c. Check that the levelness and tension of the belts are proper.

d. Check that all the lubricating points are oiled and lube is effective.

e. Check to see if driving parts collide against one another.. If any, seek the cause and remove it.

f. Fix the housing cover carefully. Start the motor by a quick touch. Make sure that the rotation direction is right. (counter clockwise for main motor, clockwise for sizing motor)

If everything is OK, the unloaded trial run can be made.

(1) Start the separator motor first, then the pulverizer motor and feeder motor in turn. Start each motor after the previous motor is running stably.

(2) Let the machine running without load for about 1 hour and test the bearing temperature. Do disassemble the filtering screen of the air-inlet beside the housing and test with point thermometer. The rising temperature of the bearing con not be 35℃ higher than the room temperature. The highest temperature should not be more than 75℃.

(3) Check to see if there is any abnormal vibration and noise in the machine. the amplitude of vibration tolerance allowed is 50kmF.

(4) If electric current passing through the machine exceeds the rated current for some unidentified causes while the machine is running, stop the machine as soon as possible to check to see if there is any abnormality inside the machine.

(5) As the belts are easy to be lengthened just after running, pay more attention to belt's tension.

If everything is OK, the loaded trial run can be made.

(1) START-UP SEQUENCE (See Figure1)

Start the airlock motors of all cyclones first, then start the fans. Finally, start the motors of separator, pulverizer and feeder in turn according to the technological process.

(2) KEEP THE NALANCE OF FLOW RATE

Adjust the rotational speed of feeder motor to the lowest value, increase the rotational speed of feeder motor gradually based on the current of main motor to a certain value, so that the current of main motor is within the rated value, and the machine can work under the best load.

(3) PREVENT CYCLONE FROM BLOCKING

Keep the discharge of all cyclones smooth. If finding materials pile up or there are no materials through the sight glass of the airlock, seek the cause at once and remove the problems.

(4) Often pay attention to adjust all materials transmitting pipes, cyclones and butterfly valves to ensure a stable airflow rate in the materials transmitting pipes.

(5) Often check to see if the fan runs stably and normally, and to see if the bearing heat up and if the screws loose, and also to see if it's well oiled in the bearings.

(6) Often check the airlocks to see if they run normally, if they block with materials, and to see if the pulse filter removes dust well. Remove the problems immediately if finding any.

(7) Fineness adjustment

Adjust the fineness by changing the rotational speed of separator and adjusting the air flow.

The fineness can be adjusted by changing the separator's rotational speed. Bigger size of finished products will be obtained by reducing the rotational speed, while smaller size of finished products can be obtained by increasing the speed.

By adjusting the airflow through the chamber, the sizing point will change and the fineness of finished products will also change. More airflow makes bigger products size while less airflow makes smaller products size. The feeding rate will change as the product size changes. As product size will be reduced by increasing the rotational speed of separator and decreasing the airflow, more pulverized materials in the machine is held up. Therefore, the value of currents of both pulverizing motor and sizing motor increase. Conversely, the values decrease. During the production, you must confirm that the current is not overloaded while adjusting the feeding rate.

SEQUENCE FOR STOPPING THE MACHINE:

Before stopping the machine, close the gate under the materials storing chamber. The stop the feeder motor, pulverizer, separator and finally fan and airlock.

WARNING: When the machine is running, access or touch of any objects (including all parts of human body) to the machine is strictly prohibited, and the machine should be turned off when repairing the machine, so as to prevent any accident from occurring and human body from being injured.

2. When the feeder is plugged, don's use the

hands and sticks to help feeding.

3. Don't let the iron and stone mix in the grinding materials.

4. According to the grinder's nameplate to choose power. Don't improve the speed of the main shaft liberty.

5. The installing field should be liberality and airiness. And there is enough place to escape and fire extinguisher.

5. COMMON TROUBLE AND TROUBLESHOOTING

Trouble	Cause	Removal Method
There is abnormal noise in the housing	1. The housing touches the separator. 2. Foreign materials enter the housing	1. Caused by careless assembly. Disassemble and repair it. 2. Check and remove foreign materials.
Bearing has abnormal noise	1. Lubricating grease is not sufficient. 2. There are foreign objects in it. 3. 3. Bearing is worn	1. Add grease. 2. Disassemble it and clean it with light oil or refined oil. 3. Replace with a new one.
The machine stops due to overload	1. The feeding rate is too large. 2. Adhesive materials increase in the pulverizing chamber.	1. Reduce the feeding rate. 2. Clear them away.

Capacity decreases	1. The gear ring is adhesively plugged by powder. 2. The cutter blade and gear ring worn. 3. Airflow decreases 4. The belt for pulverizing vane slips. 5. Parameters of air net system change.	1.Clean the gear ring 2. Replace with new ones. 3. Air leaks or pulse filter is blocked. 4. Adjust the tension of belt 5. Check the air net system and solve the abnormalities.
Average fineness increases	1. Separator worn 2. The belt for sizing vane slips. 3. Excessive gap between sizing vane and upper cover.	1. Replace it. 2. Adjust the tension of belt. 3. Make adjustment
Noise and vibration increase greatly	1. Dynamic equilibrium of the cutter is not good 2. Gear ring is adhesively plugged by powder. 3. Bearing worn 4. The newly-mounted belt has no tension after some time of working. 5. Dynamic equilibrium of the grading vane is not good.	1. Correct the dynamic equilibrium. 2. Clean the gear ring 3. Replace bearing 4. Tension the belt 5. Correct the dynamic equilibrium.
Main part of the machine con not be started	1. Motor is damaged 2. Circuit has trouble	1. Replace the motor. 2. Shoot the troubles in circuit.

6. MAINTENANCE AND REPAIR

6.1 ROUTINE INSPECTION

Make routine inspection as follow:

(1) Listen to machine from all sides to see if there is abnormal noise init .

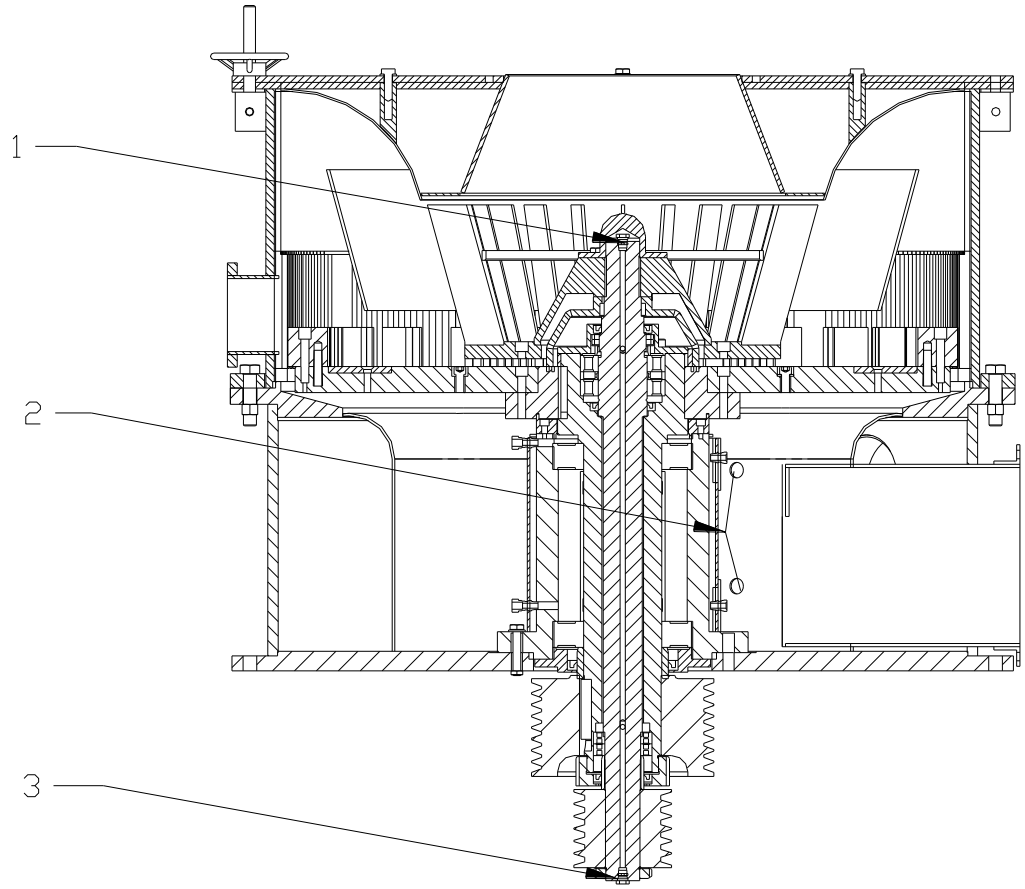
(2) Listen to the bearing to see if there is abnormal noise and touch them to see if there is abnormal temperature rising.

(3) Check all the fasteners to see if they are all tight and reliable.

(4) Check the tension of all belts for pulverizing, sizing and materials conveying.

(5) Do lubrication strictly according to the lubrication drawing (See Figure 9). Fill oil to required points and add more in time.

(6) Keep the surface of the machine clean.



1. Add 6-8CC every 30 hours;
2. Add 25CC every 30 hours;
3. Add 6-8CC every 30 hours.

Grease Brand : CALTEX Lubricant for high speed bearing: RPMGREASESRI2. In addition, add oil once a week to bearing of feeder and worm. Grease Brand : SY1415-80. ZG-2 means No.2 Ca radical lube.

FIGURE 9 LUBRICATION

6.2 REGULAR INSPECTION

When overhauling the machine, examine and do some replacement as follows:

(1) Disassemble the main machine, check the wear and tear of cutter, cutter blades, gear ring and separator. Replace at once when necessary. (Especially, cutter blade must be inspected often.)

(2) Check to see the steel balls of the bearing are worn. If so, replace in time.

6.3 REPAIR

6.3.1 REPLACE THE SIZING VANE (4). (See Figure 4).

When the sizing vane(4) is severely worn, it must be replaced.

a. Loose the handwheel (75), open the upper cover (1).

b. Loose the bolt (15), screw off the cap nut (6), and the sizing vane can be disassembled.

6.3.2 REPLACE THE CUTTER BLADES

a. Open the upper cover as mentioned steps above, disassemble the guide ring.

b. Loose the bolt (9), remove the washer (10) and bolt (67), remove the seal ring (69), and the cutter can be disassembled.

6.3.3 REPLACE THE CUTTER BLADES

a. open the upper cover (1), disassemble the cap nut (6) and the sizing vane (4) as above steps.

b. Remove the seal washer (70), screw off the bolt (67), remove the seal ring (69), and the cutter can be disassembled.

6.3.4 REPLACE THE MAIN SHAFT BEARING (13) (SEE FIGURE 4)

a. The disassembling sequence is as above till the cutter is disassembled.

b. Oull spring washer (35) straightly, screw off nut (36), disassemble

pulley (34), screw off bolt (40), remove screw cap (25) and oil seal(26).

c. Pull spring retainer (30) straightly, screw off screw cap (32), and remove the pulley (28), distance collar (38), (27).

d. The shaft (20), shaft (43), bearing (39), nut (66) disassembled should be in one assembly.

e. Take down the bearing (19).

6.3.5 REPLACE THE SIZING SHAFT BEARING (17), (39))see Figure 4)

a. The disassembling sequence is the same as above till the disassembled shaft (20), shaft (43), bearing (17) (39), nut (66) in one assembly.

b. Screw off nut (66), take out the shaft (43) so that 2 pieces of bearing (17) can be removed from shaft (43) and 2 pieces of bearing (39) can be removed from shaft (20).

7. RULES FOR TRANSPORTATION, STORING AND MAINTENANCE

7.1 During transportation, pay more attention to the packing and storing signals on the packing case when hoisting and unloading the machine.

7.2 When installing and hoisting the machine, tie the hoisting tower of the machine frame with a rope. It's forbidden to tie other place with rope for hoisting. Otherwise, the paint coated on the machine may be scraped.

7.3 When open the packing case, you should check the outside of the machine. Which is according to the packing list and documents.

7.4 Keep the machine properly from rain and sun when it is not used for a long time

7.5 See Figure 10 for hoisting the machine.

8. APPIDEX

8.1 SWFL75 main vulnerable parts list

ITEM	NAME	QTY	Installing Part	Remark
1	Lining board	1	in the box	
2	Blade	24	on the knife-blade	

3	knife-blade's sealed process	1	n the knife-blade	
4	upper of knife-blade	1	upon the grinding bearing	
5	Vulnerable part	6	in the knife-blade	
6	belt	2	feeding motor's belt and chain	
7	belt	4	Grading motor's belt wheel	
8	5V tape5V belt	8	grinding motor's belt wheel	
9	bearing	2	on the sizing bearing	
10	Sealing ring	1	upon the bearing base	
11	baring	2	on the grinding baring	
12	Oil enveloper	1	under the grinding bearing	
13	unmoving gasket	1	under the grinding belt wheel	
14	unmoving gasket	1	under the grading belt wheel	
15	bearing	2	under the grading bearing	
16	Oil enveloper	1	upon the grading bearing	
17	Sealed circle	1	upon the knife-blade	
18	Oil seal	1	belt end of the feeder	
19	Oil seal	2	Feed inlet of the feeder	
20	Bearing	2	feeding bearing	
21	Oil seal	1	upon the upper grading bearing	

8.2 Main vulnerable parts list of SWFL102

No.	Name	Qty.	Installing Part	Remark
1	gear plate	1	In the box	
2	blade	24	On the knife-blade	
3	sealed section the knife-blade	1	On the knife-blade	
4	upper of the knife-blade	1	upon the grinding bearing	
5	worn plate	6	in the knife-blade	
6	chain	1	feeding motor's chain wheel	
7	belt	6	Grading motor' belt wheel	
8	5Vtape 5V belt	6	Grinding motor's belt wheel	
9	baring	2	upon the grading bearing	
10	Sealing ring	1	upon the bearing base	
11	bearing	2	on the grinding bearing	
12	oil seal	1	under the grinding bearing	
13	unmoving gasket	1	grinding belt wheel	
14	unmoving gasket	1	under the grading belt wheel	
15	bearing	2	under the grading bearing	
16	oil seal	1	upon the grading bearing	
17	Sealing ring	1	on the knife-blade	
18	oil seal	1	Belt end of the feeder	
19	oil seal	2	Feed inlet of the feeder	
20	bearing	2	feeding bearing	
21	oil seal	1	under the upper of the grading bearing	

Note: There are two kinds knifes, one is normal knife, another is high-grade knife.

8.3 Main vulnerable parts list of SWFL128

No.	Name	Qty.	Installing Part	Remarks
1	Gearing Plate	1	In the gearbox	
2	Blade	24	On the knife-blade	
3	Sealed section of the knife-blade	1	On the knife-blade	
4	upper of the knife-blade	1	Upon the grinding bearing	
5	worn plate	6	upon the knife-blade	
6	chain	1	feeding motor’s chain wheel	
7	belt	5	Grinding motor’s belt wheel	
8	5V tape 5V belt	6	Grinding motor’s belt wheel	
9	bearing	2	upon the grading bearing	
10	Sealing ring	1	upon the bearing base	
11	bearing	2	on the grinding bearing	
12	Oil seal	2	under the grinding bearing	
13	unmoving gasket	1	under the grinding belt wheel	
14	unmoving gasket	1	under the grading belt wheel	
15	bearing	2	under the grading bearing	
16	Oil seal	1	upon the grading bearing	
17	Sealing ring	1	on the knife-blade	
18	Oil seal	1	Belt end of the feeder	
19	Oil seal	1	Feed inlet of the feeder	
20	bearing	2	feeding bearing	
21	Oil seal	1	under the upper of the sizing bearing	

Warranty period: 1 year warranty from the date of sale of this product (except vulnerability parts)In case any quality shortage and damage are found out, we will supply free repair. If not quality shortage and damage, we

will supply parts and service that are not cost-free.

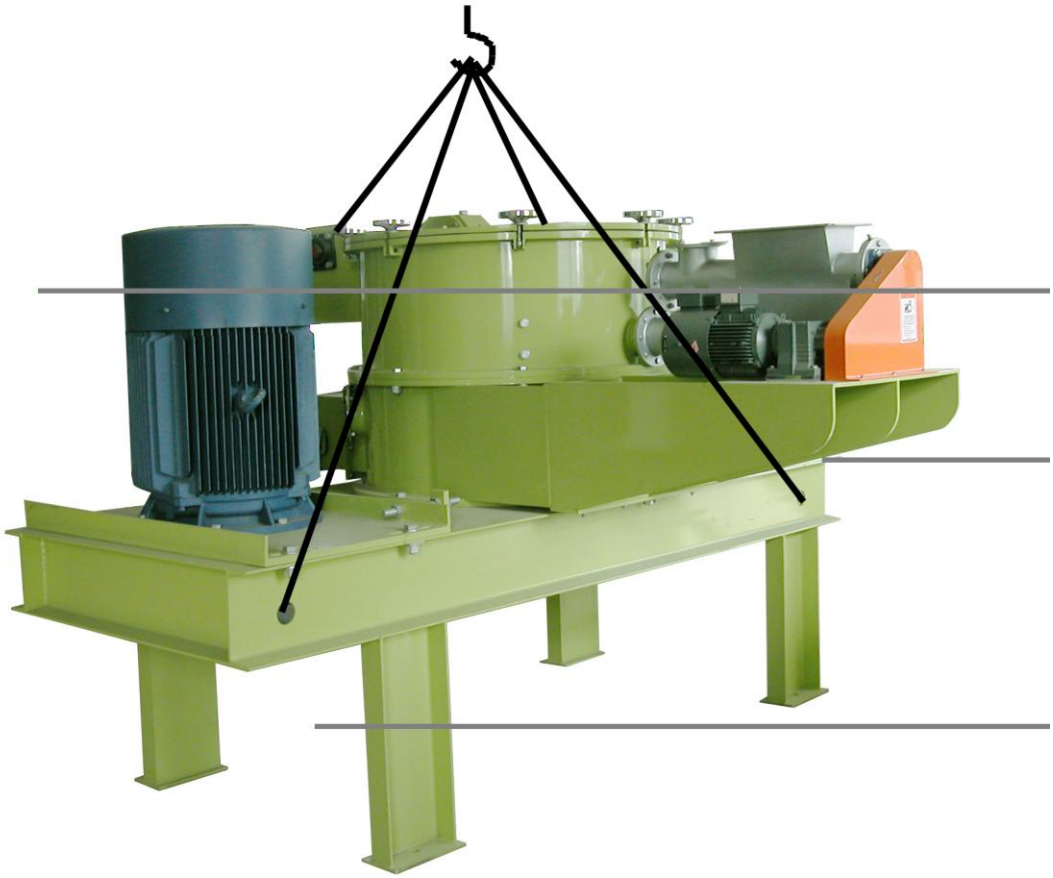


Fig. 10 Lifting

1. OCUMENTS ATTACHED

Item No.	Description	Unit	Qty.	Remark
1	User's Manual	Copy	1	
2	Quality Certificate	Copy	1	
3	Packing List	Copy	1	
4	User's Comment on this product's quality	Copy	1	

2. MAIN MACH INE AND EQUIPPED EQUIPMENT

No.	Model	Uint	Qty.	Remark
1	Main Engine	set	1	
2	cyclone	set	1	
3	Air locker	set	1	
4	Pulse Filter	set	1	
5	Pulse filter controller	set	1	
6	Magnet adjusting speed motor controler	set	2	
7	High-pressure fan	set	1	
8	Air filter used for the pulse to connect the soft pipe	Unit	1	
9	Air system pipeline	set	1	

ZTMT
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