SG-70

Sound-proof Central Granulator

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1. General Description

Read this manual carefully before installation and using this machine to avoid personal injuries or damage of the machine.

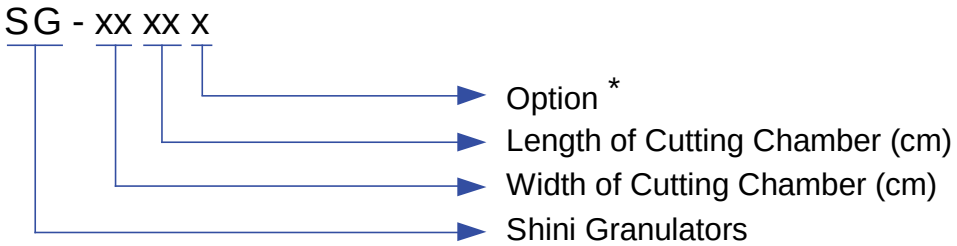
Note!
Be careful during operation, the knives of the granulator are very sharp and can cause personal injury.

For bidden to process any poison or flammable materials.

SG-70 series granulators are applicable to granulate various kinds of plastic materials from injection moulding, blow moulding or extrusion moulding. This series feature compact design, easy operation and quick blade replacment. It is great in motor power, cutting chamber size, and output capacity. Gradually inclined cutting and integrated power design offer a better cutting effect and a lower noise level.

Model: SG-70120

1.1 Coding Principle



Note：*

H=Higher Motor Power F=Fiber-added FAD=Full-receiver Alarm device

R=For Stainless Steel Made Feed Port and Storage Tank

1.2 Features

Standard configuration

1) Rotating cutters adopt newly developed V-type cutting technology which can send the feeding material into the center of rotating cutters so to prevent the material from adhering onto the inner side of the cutting chamber while enhancing its wearability.
2) The cutters are made of imported high quality steel featuring wearability, high rigidity, long service life and reusable after sharpening.
3) Presetting knife jig, simple cutter installation adjusting technology makes the rotating blades be adjusted within clamps outside machine, no longer needs to be adjusted from inside of machine as before.
4) Cutting chamber made of high rigidity material, after processing by CNC machine, has the features like high intensity, super wearability, no contamination, long service life and easy for maintenance and repairing.
5) Optimized structure and hermetic double sound-proof layers keep noise level low.
6) Sound-proof feeding box reduces the noise level in operation, also equips a safety material checking curtain which ensures no material sprinkling during granulating.
7) V-type transmission belts help maintain a balanced operation mode, close contact, and also easy to disassemble and repair.
8) Both Feeding hopper and screen cradle can be opened and closed by a hydraulic system with self-lock function, which ensures safety operation.

9) Cooling pipe at rear plate of cutting chamber can effectively cool down and prevent the inside material from melting up.

Accessory option

1) Cyclone dust separator is available for choose and the height of its floor stand can be adjusted on different requirements.
2) Separate blower, conveyor and material side feed pipe are optional.

All service work should be carried out by a person with technical training or corresponding professional experience. The manual contains instructions for both handling and servicing. Chapter 6, which contains service instructions intended for service engineers. Other chapters contain instructions for the daily operator.
Any modifications of the machine must be approved by SHINI in order to avoid personal injury and damage to machine. We shall not be liable for any damage caused by unauthorized change of the machine.
Our company provides excellent after-sales service. Should you have any problem during using the machine, please contact the company or the local vendor.
Headquarter and Taipei factory:
Tel: (886) 2 2680 9119

Shini Plastics Technologies (Dongguan), Inc:
Tel: (86) 769 8111 6600

Shini Plastics Technologies India Pvt.Ltd.:
Tel: (91) 250 3021 166

1.3 Technical specifications

1.3.1 Specifications

Table 1-1: Specifications

Model	SG-7090	SG-70120
Motor Power (kW, 50/60Hz)	75	90
Rotating Speed (r.p.m. 50/60Hz)	525	525
Conveying Blower (kW, 50/60Hz)	4.0	5.5
Handspike Motor Power (kW, 50/60Hz)	1.5	1.5
Material of Blades	SKD11	SKD11
Number of Fixed Blades(optional)	2 (3)	2 (3)
Number of Rotating Blades	3 (5)	3 (5)
Cutting Chamber (mm)	700 × 900	700 × 1200
Max. Throughput Capacity (kg/hr, 50/60Hz)	1300	1800
Noise Level dB(A)	115	115
Regrinds Conveyor	√	√
Cooling pipes	√	√
Dia. of Screen Hole (12 mm)	√	√
Flywheel	√	√
Presetting Knife Jig (PFF-70)	√	√
Dust Separator (DS-70)	o	o
Dia. of Screen Mesh (10,14 mm)	o	o

Note: 1) "√" standard, "o" optional. We reserve the right to change specifications without prior notice.

2) Model denotes " FAD " when machine fitted with full alarm device.

3) SKD11 is material code number of Japanese JIS standard.

4) Maximum throughput of granulator is subject to the diameter and Matreial of screen mesh. For granulating frame and shell materials, Maximum throughout will be reduced about half.

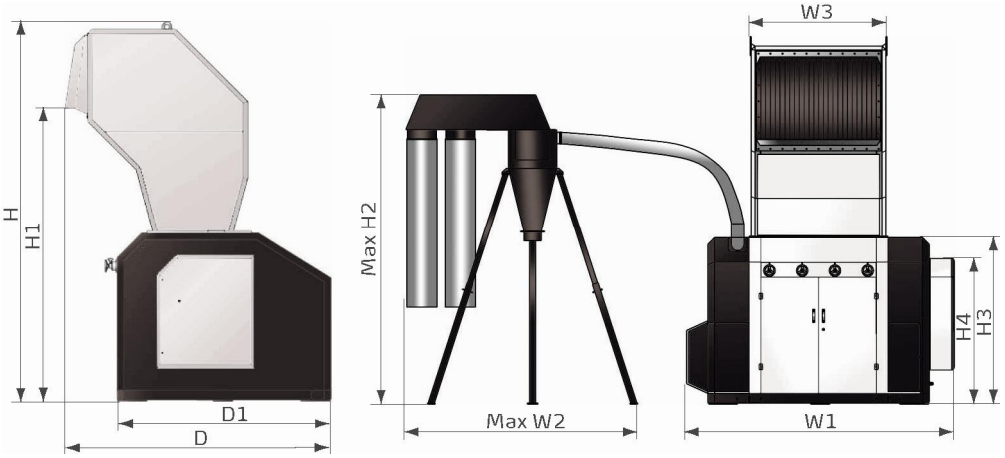
5) Noise level will vary with different materials and motor types.

6) Noise level refers to the following conditions: 1 meter around and 1.6 meter above the machine.

7) For avoiding plastic to adhibit the blade, all materials should be crushed at normal temperature.

7) Power supply: 3Φ, 230 / 400 / 460 / 575VAC, 50 / 60Hz.

1.3.2 Outline Drawing



Picture 1-1: Outline Drawing

Table 1-2: Outline Drawing Specifications

Model	SG-7090	SG-70120
H (mm)	3830	3830
H1 (mm)	2760	2760
Max H2 (mm)	3153	3153
H3 (mm)	1720	1720
H4 (mm)	1510	1510
D (mm)	2680	2680
D1 (mm)	2200	2200
W1 (mm)	2480	2780
Max W2 (mm)	2400	2400
W3 (mm)	1200	1420
Weight (kg)	4500	5000

1.4 Safety Guide

Operation of the machine should be done according to safety guide so as to avoid personal injuries and damage of the machine.

1.4.1 Safety Signs and Labels

Electrical components should be installed by professionals.

Main switch and control switch should be shut off during maintenance.

Don't let any part of your body get into the granulator before you disconnect the main switch and control switch.

Warning! High Voltage
This sign is attached to the surface of the control box!

Sharp rotating blades may cause injuries!

Rotor should not be rotated by hands. Pay more attention to it.

You should not start the granulator before the feed box and screen housing are tightly shut.

The protective sponge and the quick coupling clip at storage box outlet must not be taken apart.

When it is granulating, the operator should wear earplugs!

When open feed box, please make sure the front door is opened.

Loading blower is applicable to convey regrind powder and it requires the temperature less than 80℃.

Loading blower has great suction power and it is easy to have objects and clothes suctioned into and lead to personal injuries. So the blower should not be used without any protective cover.

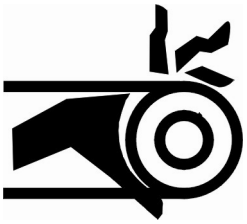
When it is working with transmission belt, please carefully check if the operator's clothes, arm or leg has been stuck by the transmission belt.

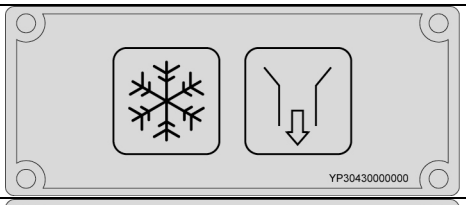
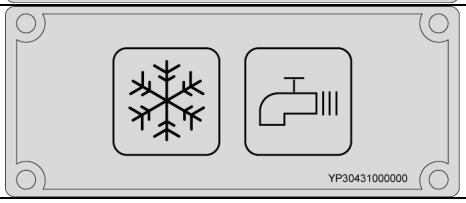
Air inlet dust clean.

Attention!

No need for regular inspection because all the electrical parts in the control unit are fixed tightly!

When operate the granulator, please notice the following signs

	Hazard High voltage! May lead to casualty or other serious danger. Please cut off the power before repairing. Circuit diagram should only be changed by professionals. Grounding is necessary
	Warning Pinch risk when moving belt. Take out or open protective cover is not allowed when it is running.
	Warning There is a pinch risk for this protective cover keep some distance away from that.

	Warning The cutter are very sharp, can cause injury take out or open protective cover is not allowed when it is running keep some distance away from the cutters.
	Notice Read the instruction manual carefully before operating before start, do the safety device test according to the instruction. It is not allowed to change the design of the machine unless it is approved from the manufacture.
	Water outlet: drainage outlet.
	Water inlet: inlet for replenishing water and cooling water.
	Lifting hole: used for lifting machine

1.5 Exemption Clause

The following statements clarify the responsibilities and regulations born by any buyer or user who purchases products and accessories from Shini (including employees and agents).

Shini is exempted from liability for any costs, fees, claims and losses caused by reasons below:

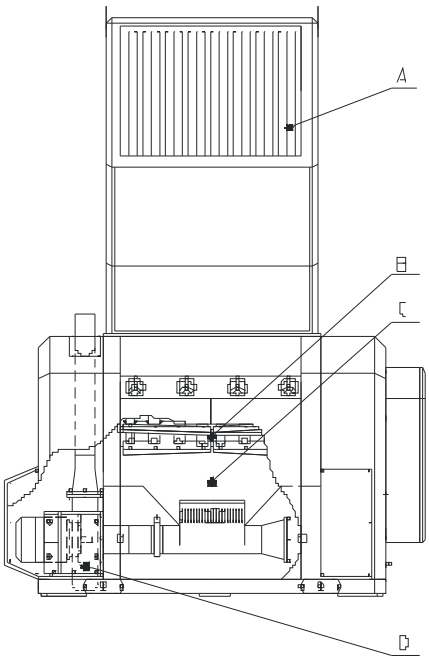
1. Any careless or man-made installations, operation and maintenances upon machines without referring to the Manual prior to machine using.
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon machine, including adding or replacing accessories, dismantling, delivering or repairing.
4. Employing consumables or oil media that are not appointed by Shini.

2. Structural Features and Working Principle

2.1 Function Description

SG-70 series are suitable for granulating various plastic wastes, including injection moulding and blow moulding and extruding moulding. Before granulating, you need to clean metal scraps and contaminations.

2.1.1 Working Principle



A. Feed in box B. Rotating blades C. Fixed blades D. Conveying blower

Picture 2-1: Function Description

Feed the material into the cutting chamber from the feeding box(A), the rotating blades(B) and fixed blades work together to granulate the materials. The size of granules is based on the hole diameter of screen. The screen is fixed under the cutting chamber, and is easy to replace screen of different diameters. The regrinds will fall into storage bin(C) through the screen, then conveying via conveying blower, the outfit blower will convey regrinds info cyclone dust separator to separate dust and air.

The granulator is controlled by main power switch, safety switch, start/stop button and emergency stop button.

Door Lock Breaker

Start/Stop Button and Emergency Stop Button

Staring Stopping Jiggle Switch of Hydraulic Pressure System

Picture 2-2: Circuit Switch Diagram

2.1.2 Safety System

Safety system is used to prevent personal injuries caused by high rotating blades. Safety system could not be altered or accidents may happen.
Under no circumstance, the safety system could be altered otherwise the machine would be in dangerous condition and easy to have accident, so any repairing and maintenance of the safety system should be done by qualified technicians.
If there has any alteration to the safety system, our company will not fulfill our promise and all the spare parts should be purchased from Shini.

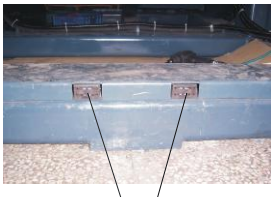
2.1.2.1 Emergency Stop Button

Press the red button on the control panel to stop the machine immediately. Turn the button counter-clockwise as indicated by the arrow on the button to reset.

Picture 2-3: Emergency Stop Button

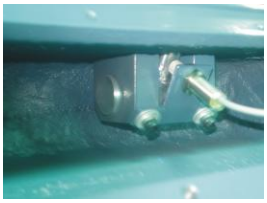
2.1.2.2 Safety Switch

Three safety switches mane involved, one is located between the feed box and the cutting chamber, the other two link to lock in machine front door and back door.



Picture 2-4: Safety Switch for Door Lock

If the machine's back door is opened or the feed-in box and storage box are moved under running condition, the machine will stop at once. Pay an attention to ensuring the operator's security.



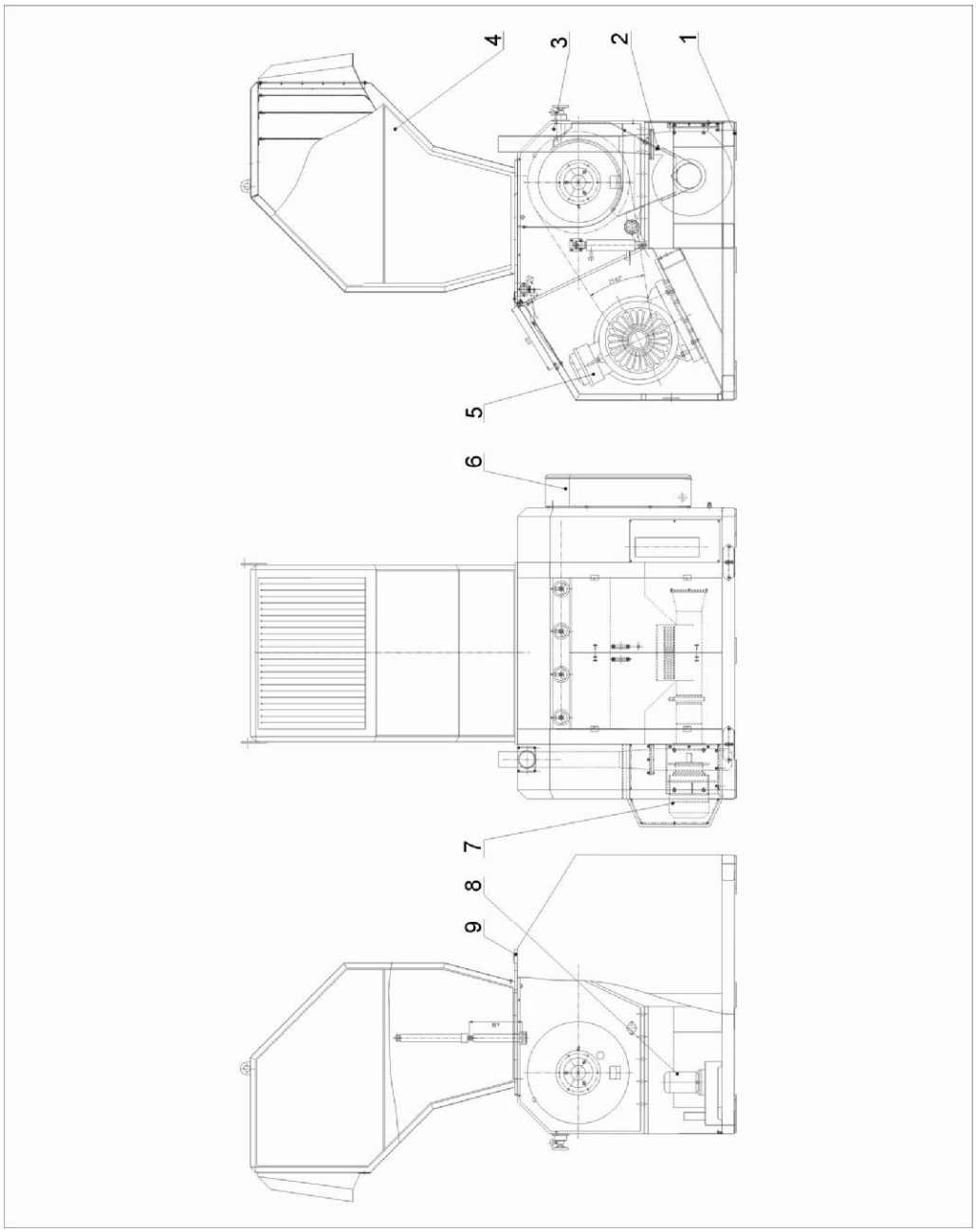
Picture 2-5: Safety Switch for Feed Box

Pay attention to following items when start the machine:

1) Check if the feed-in box has been locked up.
2) Check if the screen housing and storage box has been installed.
3) Close the machine door.

2.2 Spare Parts List

2.2.1 Main Structure

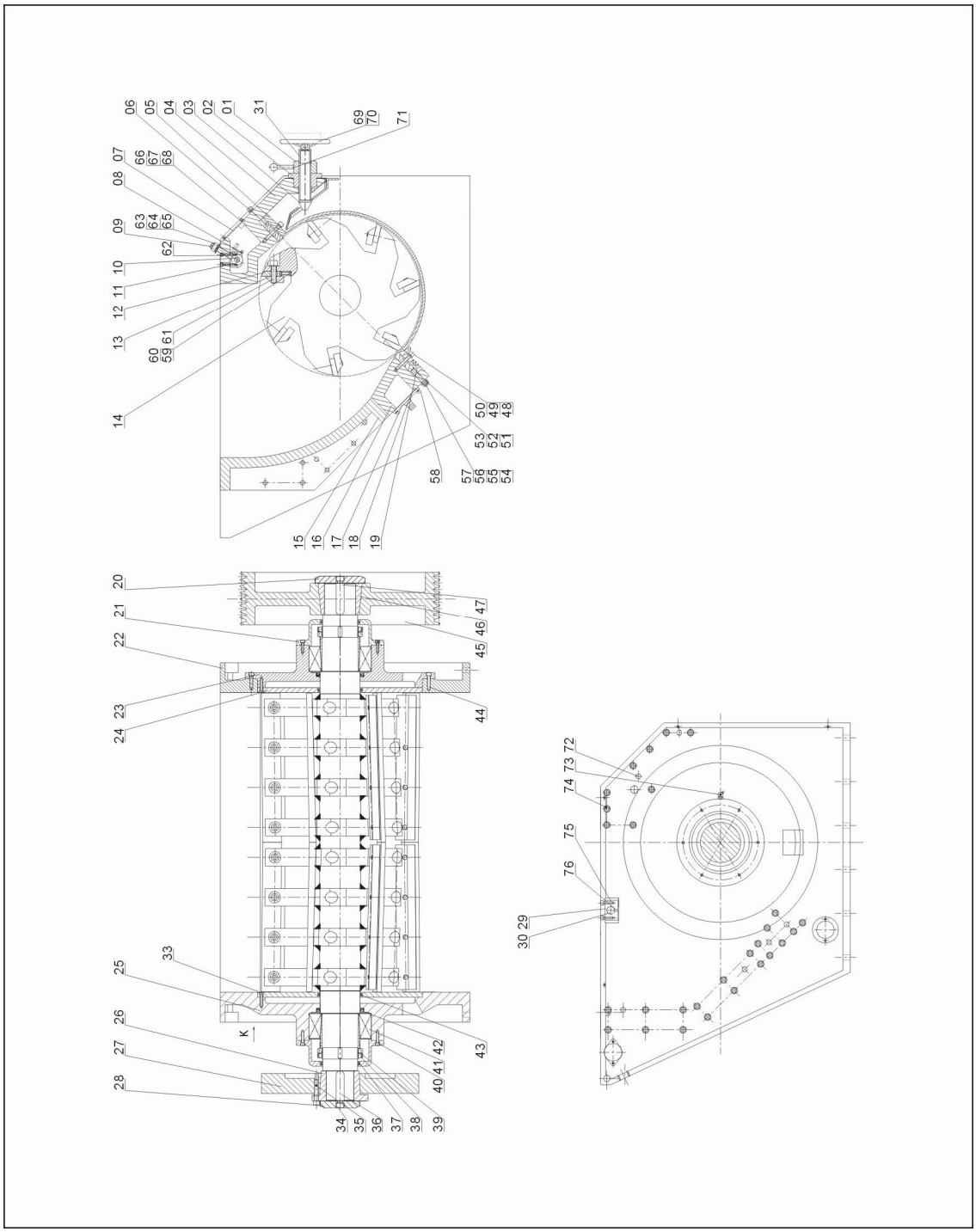


Parts name:

1. Machine assembly	2. Screen bracket assembly	3. Granulating chamber assembly
4. Feed box assembly	5. Drive unit	6. Power distribution unit
7. Convey unit	8. Hydraulic pressure unit	9. Cover unit

Picture 2-6: Main Structure

2.2.2 Cutting Chamber and Knives Rest



Note: Please refer to 2.2.4 material list about the parts code.

Picture 2-7: Cutting Chamber and Knives Rest

2.2.3 Cutting Chamber and Blade Shaft List

Table 2-1: Cutting Chamber and Blade Shaft List

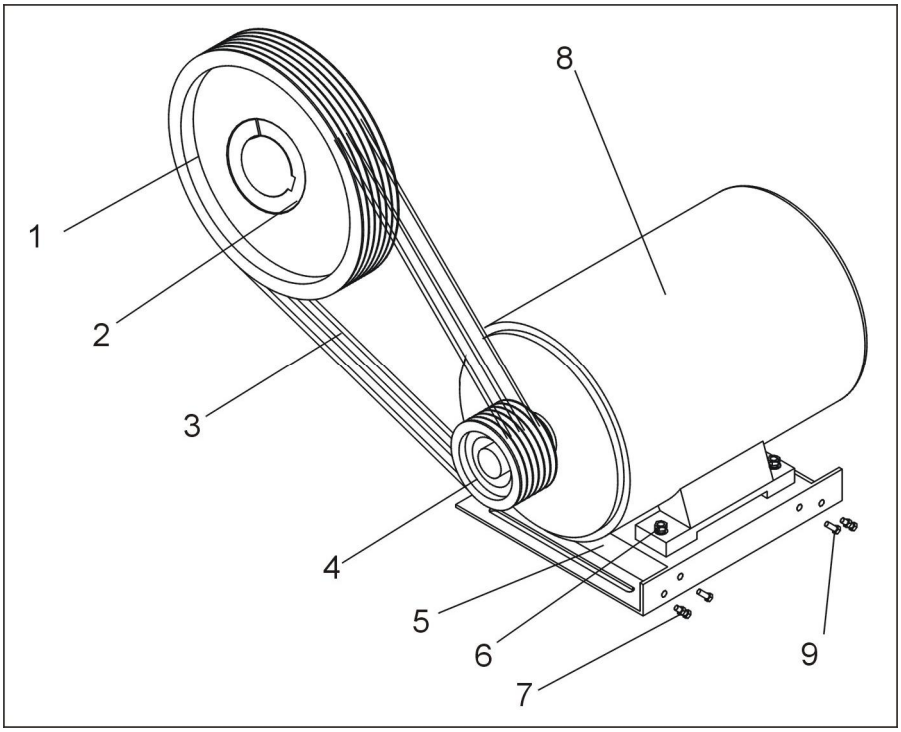
No.	Name	P/N	
		SG-7090	SG-70120
1	Trapezia lockup screen	BH10701220040	BH10701220040
2	Trapezia nut	BH10701230040	BH10701230040
3	Screen bracket fixed screw	BH10701240010	BH10701240010
4	Front block	-	YW30701205100 YW30701205200
5	Fixed blade press plate 1	-	BH10701206010
6	Fixed blade	-	YW43701200600
7	Front block cover board	-	-
8	Sensor bracket	-	-
9	Seed box lockup bolt	BH10701202710	BH10701202710
10	Lockup bolt pin	BH10701201010	BH10701201010
11	Lockup bolt base	BH10701201110	BH10701201110
12	Rotating blade	YW43701201200	YW43701201200
13	Rotating blade press plate	BH10701213010	BH10701213010
14	Blade rest shaft	-	BH10701201410
15	Bock top block	-	YW30701201500
16	Back bottom block	-	YW30701201600
17	Water tank cover	-	-
18	Water tank shim	BR90701201820	BR90701201820
19	Fixed blade press plate 2	BH10701201910	BH10701201910
20	Belt pulley taper sleeve baffle plate	BH10701202010	BH10701202010
21	Bearing cover	YW30701202100	YW30701202100
22	Right block	YW30701202200	YW30701202200
23	Left bearing block	YW30701202400	YW30701202400
24	Left and right material baffle plate	BH10701202310	BH10701202310
25	Left right block	YW30701202500	YW30701202500
26	Flywheel taper sleeve	YW30505012500	YW30505012500
27	Flywheel	YW30800800000	YW30800800000
28	Flywheel taper sleeve baffle plate	BH10701202610	BH10701202610
29	Pushing down plate pin base	BH10701211010	BH10701211010
30	Pushing down plate pin	BH10701210010-	BH10701210010-

No.	Name	P/N	
		SG-7090	SG-70120
31	Safety sleeve	BL55701202140	BL55701202140
32	-	-	-
33	Countersunk head screw with notching M12×30	YW61123000100	YW61123000100
34	Inner hexagonal screw column M20×50	YW61205000000	YW61205000000
35	Inner hexagonal screw column M16×70	YW61167000000	YW61167000000
36	Flat key with single round end C32×118	YW10321180000	YW10321180000
37	Felt seal 140(160)×12	YR80141200000	YR80141200000
38	Small circular nut M145×2	YW64145200000	YW64145200000
39	Anti-loosing washer for circular nut 145	YW65014500000	YW65014500000
40	Inner hexagonal screw column M10×40	YW61104000000	YW61104000000
41	Self-aligning roller bearing 24 130CCK30/W33	YW11241303000	YW11241303000
42	Axial lip sealing ring with inner framework	YR20161901500	YR20161901500
43	Felt seal 160(180)×12	YR80161200000	YR80161200000
44	Inner hexagonal screw column M12×45	YW61124500000	YW61124500000
45	Belt pulley taper sleeve	YW30353508000	YW30353508000
46	Belt pulley	YW30250800000	YW30250800000
47	Flat key with single round end C32×126	YW10321260000	YW10321260000
48	Inner hexagonal screw column M12×80	YW61128000000	YW61128000000
49	Flat washer 12	YW66123200100	YW66123200100
50	Spring gasket 12	YW65012000000	YW65012000000
51	Inner hexagonal screw column M10×85	YW61108000000	YW61108000000
52	Flat washer 10	YW66103200000-	YW66103200000
53	Spring gasket 10	YW65010000100	YW65010000100
54	Inner hexagon socket set screw with flat point M16×90	YW61168500000	YW61168500000
55	Flat washer 16	YW66164000000	YW66164000000
56	Spring gasket 16	YW65016300000	YW65016300000
57	Hexagon nut M16	YW64001600000	YW64001600000
58	Inner hexagonal screw column M10×40	YW61104000000	YW61104000000
59	Inner hexagonal screw column M10×60	YW61106500000	YW61106500000
60	Hexagon nut M10	YW64001000100	YW64001000100
61	Inner hexagonal screw column M20×75	YW61207500000	YW61207500000
62	Inner hexagonal screw column M8×50	YW61085000000	YW61085000000
63	Hexagon nut M20	YW64200200000	YW64200200000

No.	Name	P/N	
		SG-7090	SG-70120
64	Flat washer M20	YW66201200000	YW66201200000
65	Spring gasket M20	YW65205200000	YW65205200000
66	Inner hexagonal screw column M6×15	YW61061600200	YW61061600200-
67	Flat washer M6	YW66061800000	YW66061800000
68	Spring gasket M6	YW65006000100	YW65006000100
69	Handwheel 18×200	YW30201800000	YW30201800000
70	Flat key with single round end C5×18	YW10051800000	YW10051800000
71	Handle (handle with ball end) M12×100	YW00121400000-	YW00121400000
72	Column pin 20×80	YW10208000000	YW10208000000
73	Pressure filling oil cup with connector type 45°M10×1	YW04010100000	YW04010100000
74	Inner hexagon screw column M16×70	YW61167000000	YW61167000000-
75	Inner hexagon screw column M10×35	YW61103500000	YW61103500000
76	Inner hexagon socket set screw with flat point M8×15	YW68082000000	YW68082000000
77	Small circular screw M160×3	YW64160300000	YW64160300000

* means possible broken parts.
** means easy broken part. and spare backup is suggested.
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

2.2.4 Transmission Parts



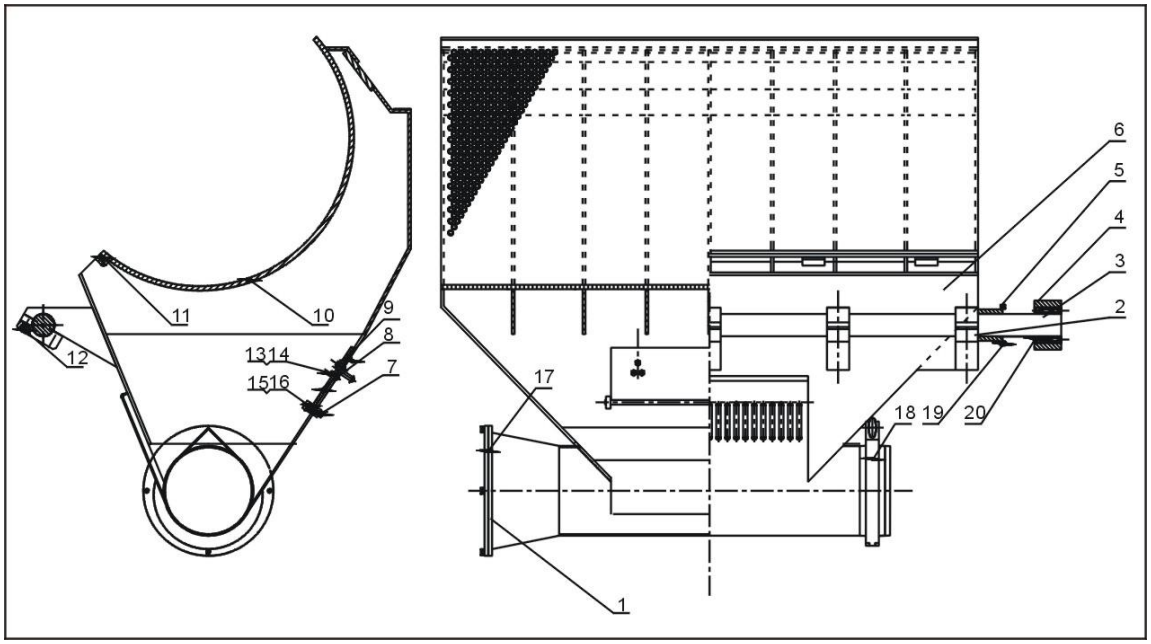
Picture 2-8: Transmission Parts

2.2.5 Parts List for Transmission Parts

Table 2-2: Parts List for Transmission Parts

No.	Name	Quantity
1	Big belt pulley	1
2	Lockup cover	1
3	V belt (SPC)	8
4	Small belt pulley	1
5	Motor base	1
6	Motor fixing screw	4
7	Adjusting nut	2
8	Motor	1
9	Adjusting screw	2

2.2.6 Screen Bracket



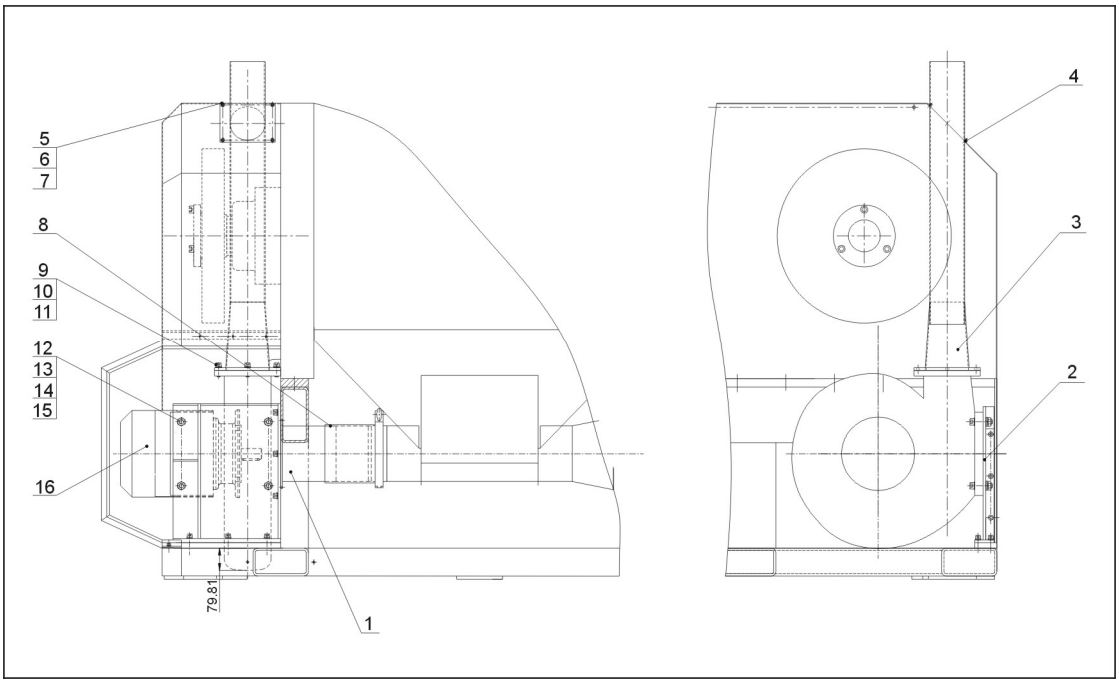
Picture 2-9: Screen Bracket

2.2.7 Parts List for Screen Bracket

Table 2-3: Parts List for Screen Bracket

No.	Name	Quantity
1	Press plate	2
2	Screen bracket axial base	5
3	Rotating shaft for screen bracket	1
4	Rotating arm for screen bracket	1
5	Rotating shaft bearing for screen bracket	2
6	Shell for screen bracket	1
7	Pin base for cover board	2
8	Cover board	1
9	Handle pothook	2
10	Screen	1
11	Fixed plate for screen	1
12	Inner hexagon screw column M8×45	20
13	Cross recessed head machine screw M5×15	8
14	Hexagon nut M5	6
15	Hexagon nut M10	2
16	Flat washer 10	2
17	Screen with 3 meshes	1
18	8″ Food degree prep connector	1
19	Inner hexagon screw M6×20	4
20	Expansion pipe	1

2.2.8 Blower



Note: Please refer to 2.2.11 material list about the parts code.

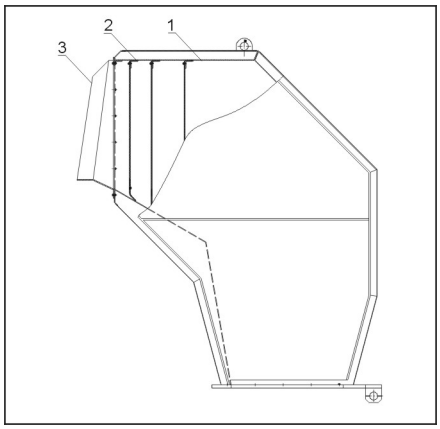
Picture 2-10: Blower

2.2.9 Parts List for Blower

Table 2-4: Parts List for Blower

No.	Name	Quantity
1	Pipe connector for blower air-inlet	1
2	Conveying blower base	1
3	Pipe connector for blower air outlet	1
4	Cover board for blower air outlet	1
5	Inner hexagon screw column M8×20	4
6	Flat washer 8	4
7	Spring gasket 8	4
8	8″ Steel-wired plastic pipe	0.5m
9	Inner hexagon screw column M12×30	12
10	Flat washer 12	16
11	Spring gasket 12	12
12	Inner hexagon screw column M16×70	4
13	Flat washer 16	8
14	Spring gasket 16	4
15	Hexagon nut M16	4
16	High-pressure blower (5.5kW)	1

2.2.10 Feed-in Box, Material Check Board Inlet



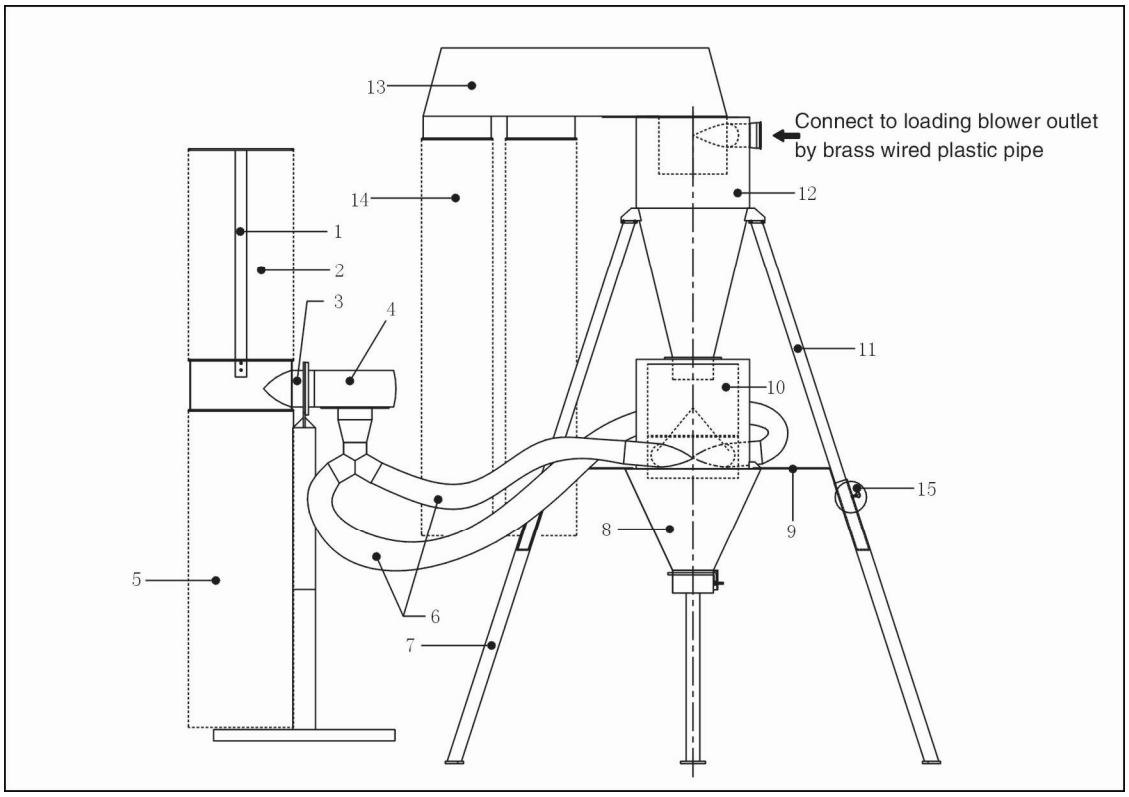
Picture 2-11: Feed-in Box, Material Check Board Inlet

2.2.11 Parts List for Feed Box and Material inlet of Baffle Plate

Table 2-5: Parts List for Feed Box and Material Inlet of Baffle Plate

No.	Name	Quantity
1	Feed box	1
2	Check board	4
3	Material inlet	1

2.2.12 Cyclone and Dust Remove Device



Picture 2-12: Cyclone and Dust Remove Device

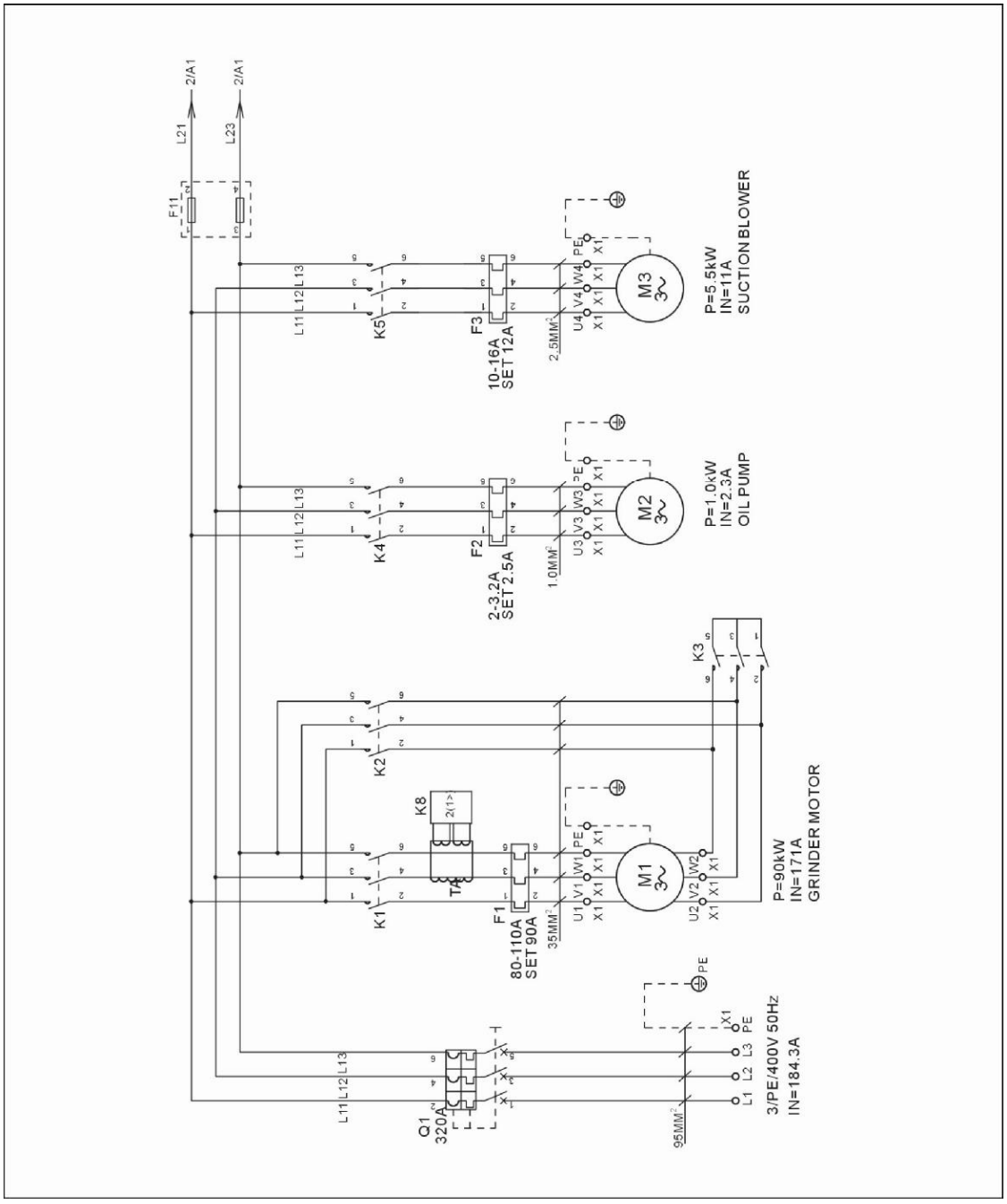
2.2.13 Parts List of Cyclone and Dedusting Device

Table 2-6: Parts List of Cyclone and Dedusting Device

No.	Name	Quantity
1	Cloth bag support 1	1
2	Dust collective bag3(gauze 450)	1
3	(6-inch)blower and cloth bag support	1
4	6-inch blower(750W)	1
5	Dust collective bag2(thick cotton fabric)	1
6	6-inch steel wired soft pipe	2
7	Cyclone separator bottom support	3
8	Dust separator and bottom hopper	1
9	Tightener	3
10	Big and small barrels of dust separator	1
11	Upper support of Cyclone separator	3
12	Mainbody of cyclone separator	1
13	Air outlet pipe of cyclone separator	1
14	Dust collective bag1(gauze450)	2
15	Upper and bottom support pins for cyclone separator	3

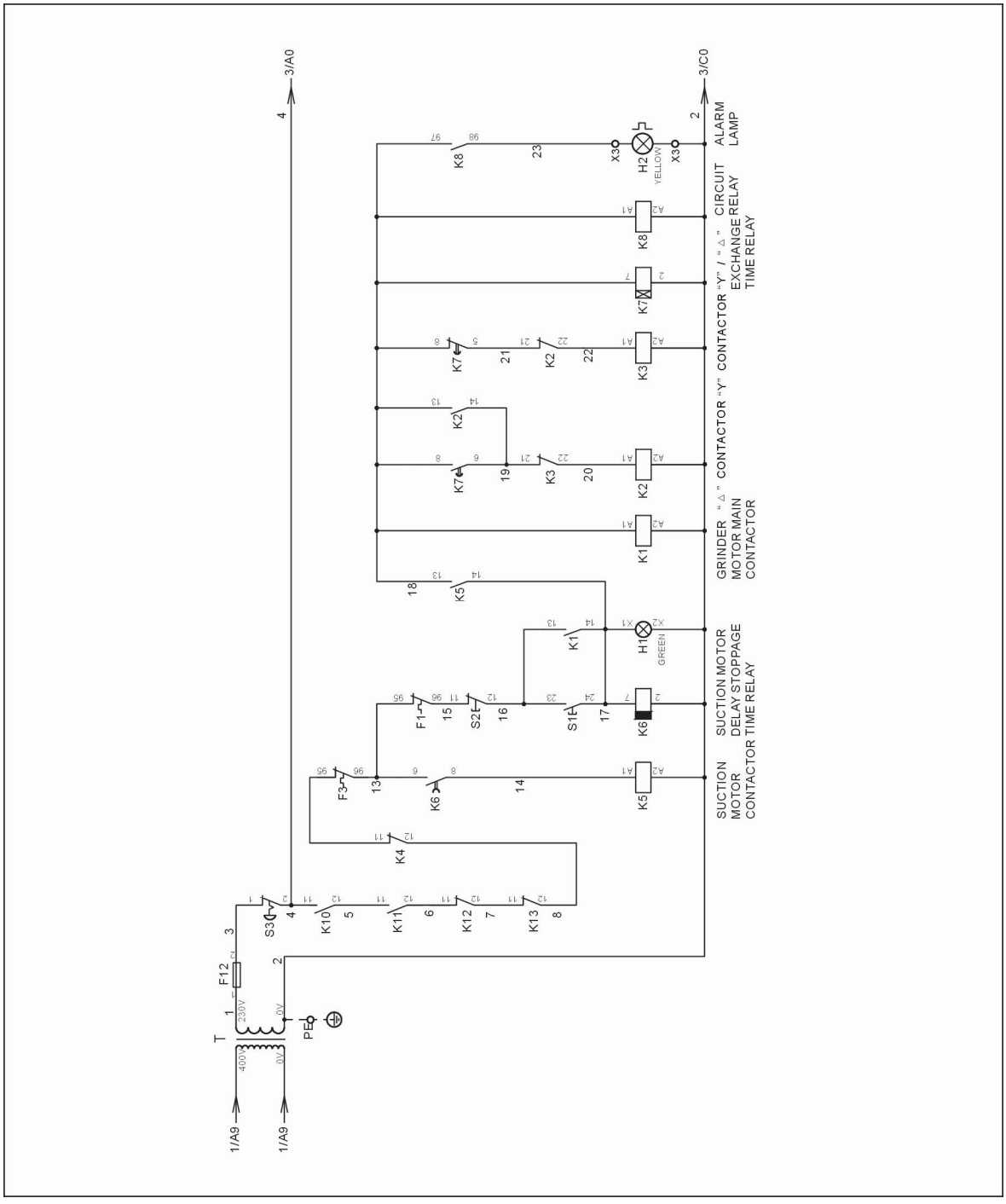
2.3 Circuit Diagram

2.3.1 Main Circuit Diagram

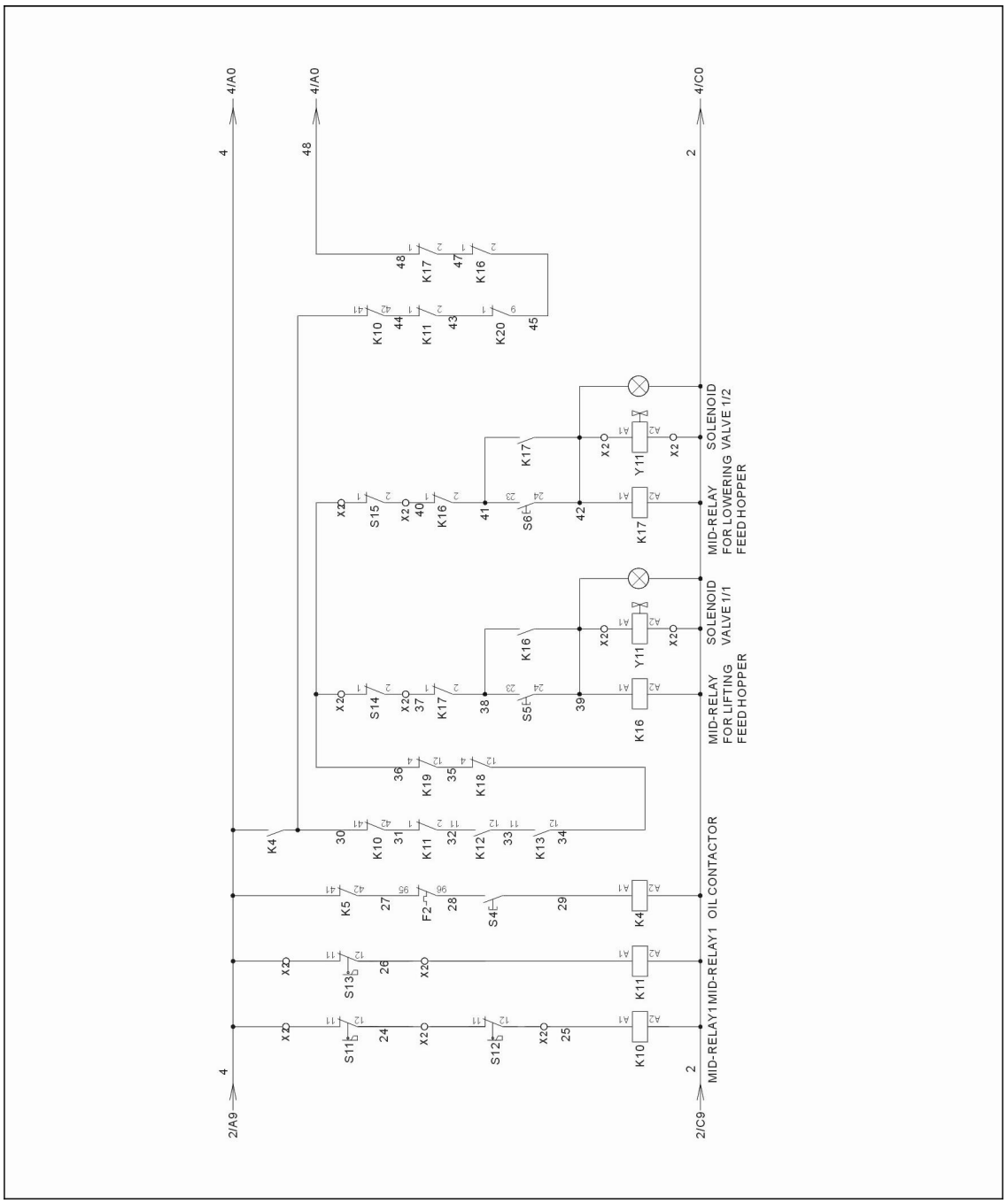


Picture 2-13: Main Circuit Diagram

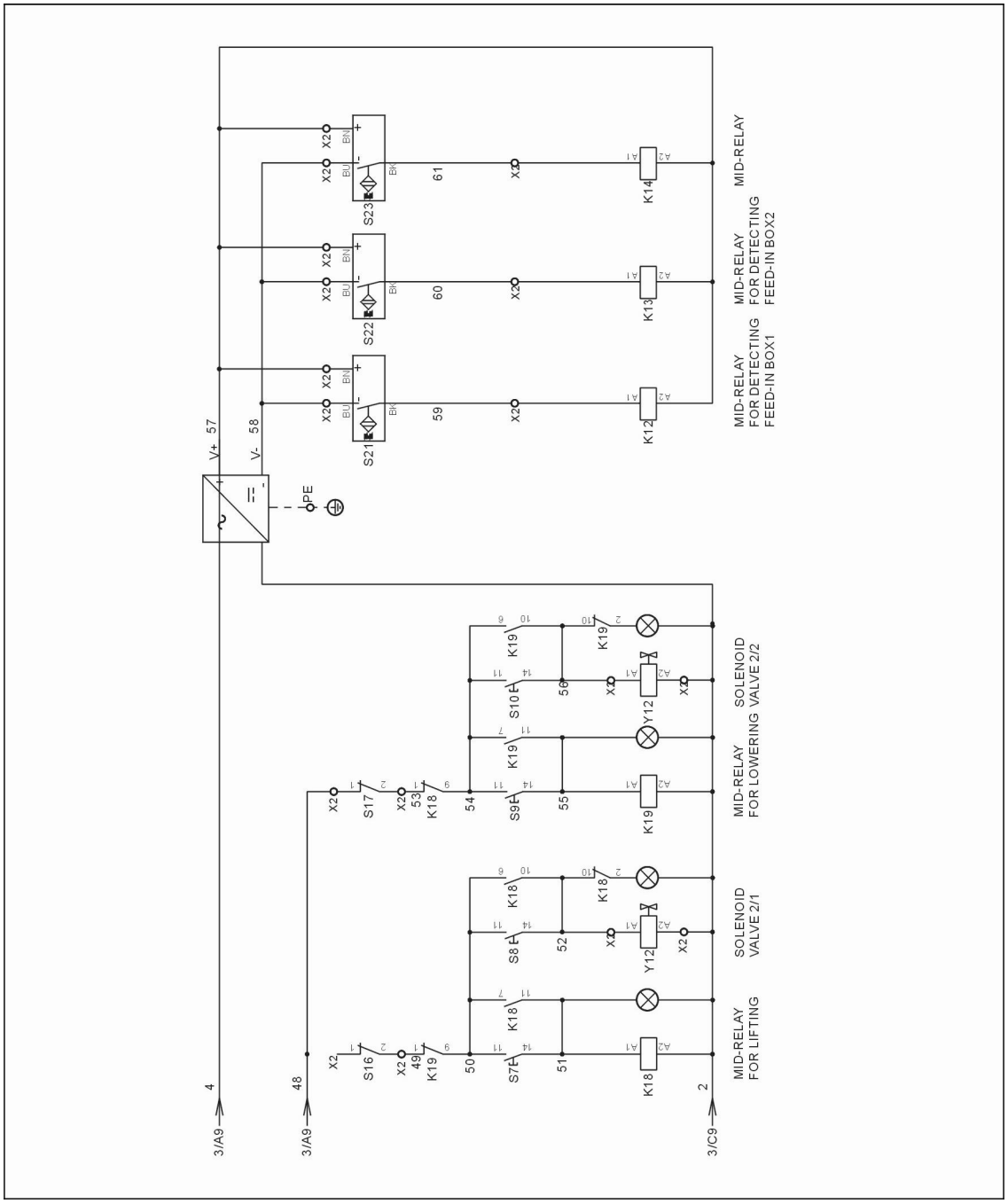
2.3.2 Control Circuit



Picture 2-14: Control Circuit 1

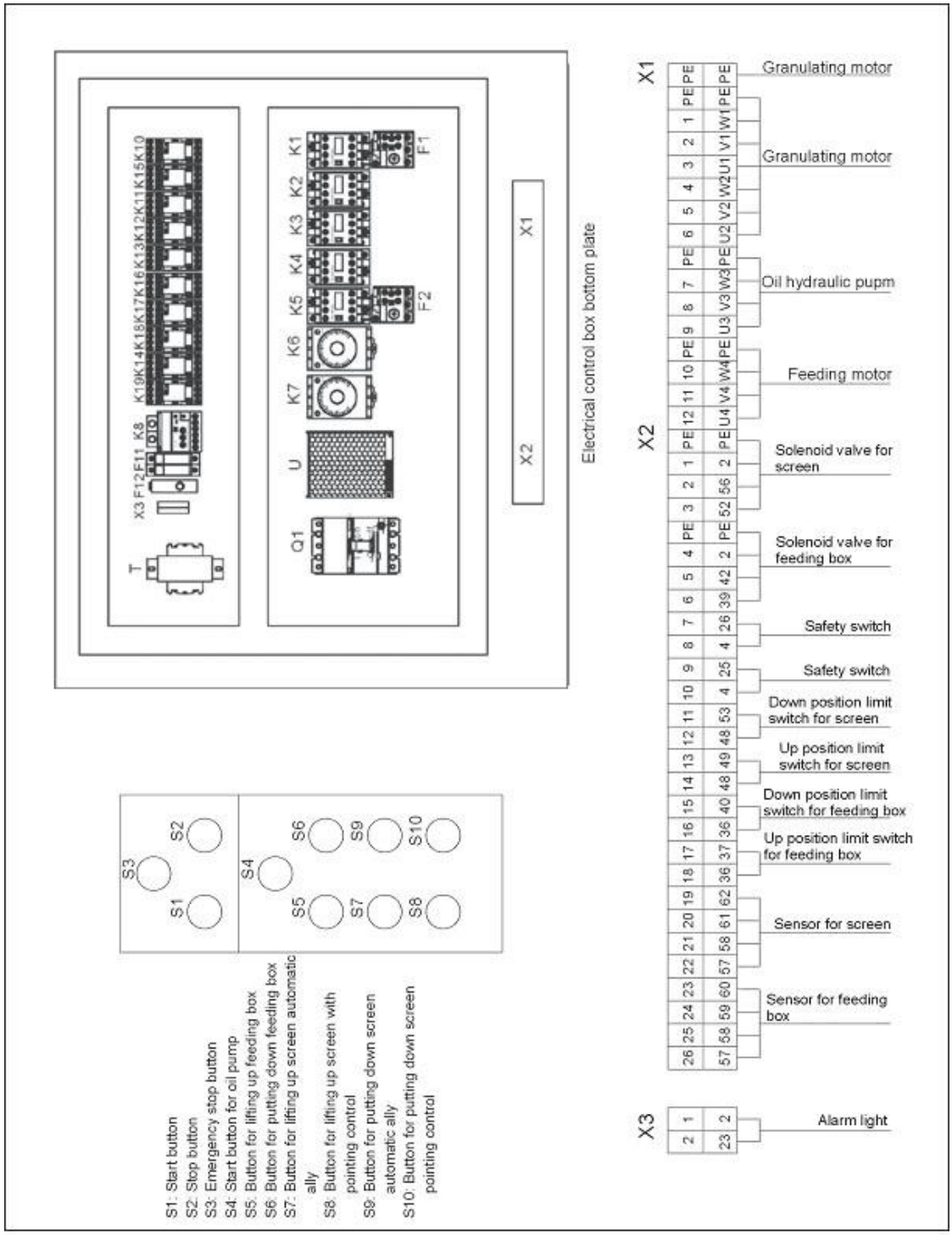


Picture 2-15: Control Circuit 2



Picture 2-16: Control Circuit 3

2.3.3 Electrical Components Layout



Picture 2-17: Electrical Components Layout

2.3.4 Electrical Components List

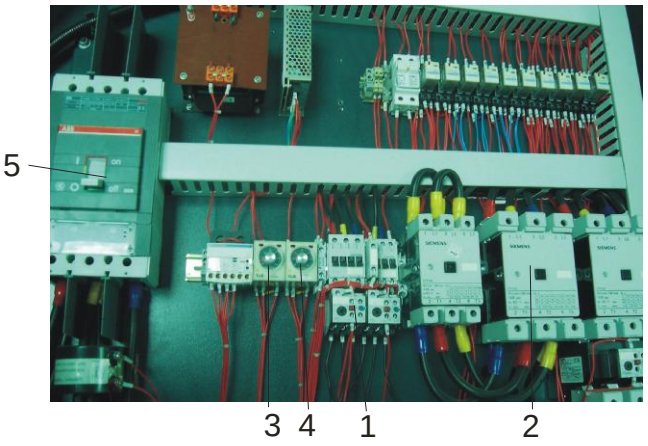
Table 2-7: Electrical Components List

No.	Symbol	Name	Specifications	P/N
				SG-70120
1	Q1	Door lock breaker	320A	YE41503200000
2	K1 K2	Electromagnetic contactor	220VAC 50/60Hz	YE00502200000
3	K3	Electromagnetic contactor	220VAC 50/60Hz	YE00492200100
4	K4	Electromagnetic contactor	220VAC 50/60Hz	YE00300100000
5	-	Auxiliary contact	INO	YE00401000200
6	K5	Electromagnetic contactor	220VAC 50/60Hz	YE00311000000
7	K6	Time relay	220VAC 3M	YE86322000000
8	K7	Time relay	220VAC 60S	YE86300600000
9	K8	Current relay	220VAC 0.5~6A	YE04476000100
10	K10 K11 K16 K17 K18 K19	Intermediate relay	220VAC	YE03570700000
11	K12 K13 K14	Intermediate relay	24VDC	YE03272400000
12	F1	Thermo overload relay	80~110A	YE01801100000
13	F2	Thermo overload relay	2~3.2A	YE01023200000
14	F3	Thermo overload relay	10~16A	YE01101600100
15	F11	Fuse	2P	YE41032200000
16	-	Fuse	2A	YE46002000100
17	F12	Fuse	2A	YE41001000000
18	TA	Electric current transformer	150/5A	YE04150500000
19	T	Transformer	1500Ma	YE70402300300
20	H2	Alarm light	230VAC	YE83305100200
21	U	DC	IN=220VAC OUT=VDC 1.5A	YE71352400000
22	H2	Alarm light	230VAC	YE83305100200
23	S1 S5 S6	Start button	400V AC12 10A	YE11325300000
24	S2	Stop button	400V AC12 10A	YE11375800000
25	S3	Emergency stop button	400V AC12 10A	YE11320300000

No.	Symbol	Name	Specifications	P/N
				SG-70120
26	S4	Two head switch	-	YE12210100000
27	S7 S8 S9 S10	Start button	400V AC12 10A	YE11375800000
28	-	Contact	INC	YE19340000100
29	S11 S12 S13	Safety switch	AZ-15	YE16147600100
30	S14 S15 S16 S17	Position limit switch	-	M-04
31	S21 S22 S23	Inductive sensor	24VDC	YE15122400000
32	Y11 Y12	Solenoid valve	230VA	-
33	X1	Transformer	-	YE61095000100
34	-	Transformer	-	YE61350000000
35	-	-	-	YE61353500000
36	-	Transformer	32A	YE61250000000
37	-	-	-	YE61253500000
38	X2	Transformer	-	YE61250000000
39	-	-	-	YE61253500000
40	M1	Motor	400VAC 50Hz	YM10313609000
41	M2	Pump	400VAC 50Hz	YM90701200100
42	M3	Blower	400VAC 50Hz	YM30554000000

* means possible broken parts.
** means easy broken part. and spare backup is suggested.
Please confirm the version of manual before placing the purchase order to guarantee that the item number of the spare part is in accordance with the real object.

2.4 Main Electrical Components Illustration



Picture 2-18: Main Electrical Components Illustration

1. Thermo overload relay, which can protect the motor when it is overloading or open phase.
2. Electromagnetic contactor, which can connect or cut off the circuit from remote.
3. Electrify delay relay, which can control motor to start from Y to △ with a voltage lower down, by doing this to save the startup current.
4. Power cut off delay relay，which can delay the blower's stop time, and when stop the machine, it can make the machine do a little extra work to suction the material at the bottom of the tube or within the storage box.
5. Main power switch, which perform the function of cutting off or connecting to power source.

2.5 Optional Accessories

2.5.1 DS-50 Dust Separate System

1) Installation show

Picture 2-19: Dust Separator System Installation Drawing

2) Outline dimensions

Cyclone (Φ600 × h13700mm)

3) Installation

Read chapter 3 carefully before operating on dust separate system the circuit connection of the system should be done by professional electrician.

Before first startup

The unpainted parts of the machine are protected with oil prior to delivery and transport. Clean the granulator from rust protection agent before it is used.

Connection

1) Place a separator under cyclone device，the diameter isΦ600mm.
2) Connect to conveying pipe, the diameter is 4 inches×2.
3) Mount dust collection device including air and dust separate bags.
4) Place a container under the separator to help collecting plastic material after

dust removing.

Notes!

If use cloth bag to connect the separator, please make sure a good ventilation within the cloth bag.

5) Operation and maintenance

Start and stop of the machine

Start and stop of the machine is controlled by main power switch.

6) Check

Daily check

Air and dust bags, check if these bags are damaged, if there is any damage, please replace them.
Check if the conveying pipe is damaged, if it is, please replace it.
Check if the connecting joint had been fixed and sealed.
Check if the dust collection bag is full, if it is, please dump it checks if the collection barrel is placed right under the dust separator, if there has any deviation, please adjust it.
Check the collection barrel, if it is full, take out the dust removed plastic in timely.

Weekly check

Check to see if the wire has any damage and the condition of the wire, if it has any problem, please fix it.

6) Clean

Clean the machine when the processing material is changed or after every 300-hour running time. Before cleaning, please cut off the power.

1) First clean the inner side of the cleaning facilitates.
2) It is necessary to check and clean dust separator.
3) Move away separator, use high pressure air to blow away its interior granules.
4) Clean out the storage hopper and clean its interior.
5) Shake the air bag to drop the dust down.
6) Assembly the disassembled parts according to reversed order.

2.5.2 Screen

Picture 2-20: Screen

Table 2-8: Screen Specification List

Model	**Hole Dia. (mm)**			
SG-70	Φ8	Φ10	Φ12	Φ14

Notes: Φ10 is standard.

2.5.3 Cutter

Table 2-9: Blade List

Material	**Relating standard steel ode**			
	China GB	USA ASTM	German DIN	Japan JIS
SKD11	Cr12MoV1	-	-	SKD11

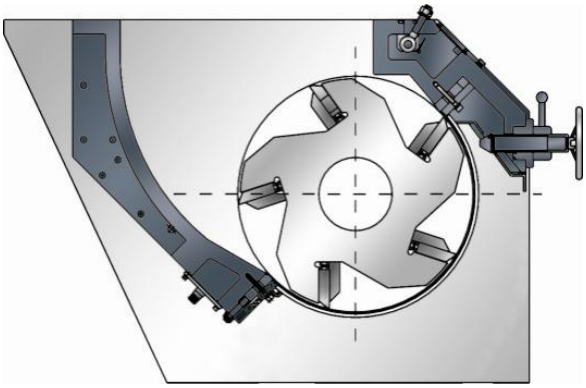
2.5.4 Blade Rest

Different Cutting Angles for Different Materials

When granulating different kinds of plastic waste, such as plates, frames, die head from injection moulding, sprues and pipes, etc., SG-70 series have two kinds of cutting angles for different materials.

1) 5 Rotating Blades and 2 Fixed Blades (Standard Type)

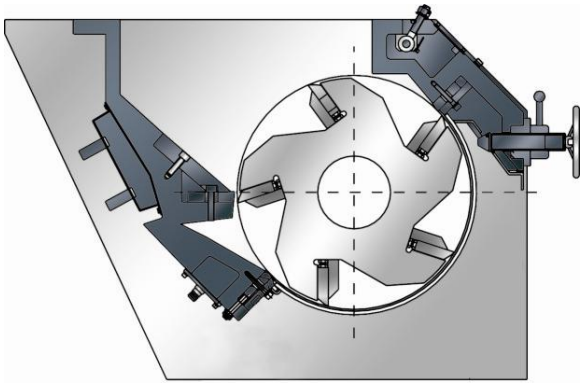
Two rows of fixed blades model have big inlet space and initially low cutting point. material is aggressively grabbed and cut thus making this rotor/housing combination ideal for the granulation of hollow objects such as bottles, crates and drums as well as large bulky materials.



Picture 2-21: 5 Rotating Blades and 2 Fixed Blades (Standard Type)

2) 5 Rotating Blades and 3 Fixed Blades

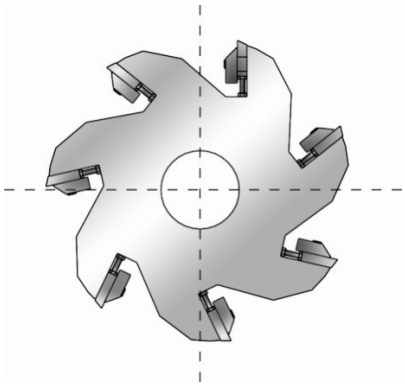
This semi-closed rotor has much smaller spaces between the blade rows thus preventing much material from dropping into the rotor and 3 fixed blades design which restricts the inlet opening and moves the initial cutting point higher in the machine, there is consequently a less aggressive cutting action meaning no blockage or rotor stall even under the most extreme conditions. These massive, extremely robust rotors are ideally suited for difficult, heavy duty applications such as start-up lumps and head waste, thick walled pipes, heavy sheets etc.



Picture 2-22: 5 Rotating Blades and 3 Fixed Blades

3) 7 Rotating Blades for High Efficiency

Within a fixed time period, the 7 blades rotor can obviously increase cutting frequency as compared with 3 blades rotor, thus the output capacity of the machine will also be increased. It can be used with 2 fixed blades or 3 fixed blades models.



Picture 2-23: 7 Rotating Blades for High Efficiency

2.5.5 Optional Feature 2 Feeding Hopper for Conveyor

Picture 2-24: Optional Feature 2 Feeding Hopper for Conveyor

Material feeding for traditional large granulators is quite a difficult matter. They are generally installed at a lower place or a platform is built for material feeding. Shini has particularly designed the belt conveyor to easily convey the material into the cutting chamber of SG-70120.

2.5.6 Optional Feature 3 Material Side Feed Pipe

Picture 2-25: Optional Feature 3 Material Side Feed Pipe

The design of feeding hopper of traditional granulators is not suitable for longer pipes and profiles. We have designed material side feed pipe for convenient feeding of long materials.

3. Installation Testing

Read this chapter carefully before installation.

Install as following orders to avoid any accident!

Be careful! Not to be cut by the sharp blade.

Power connection must be done by the professional electrician.

Table 3-1: Knives and Other Fixed Screw Torque

Screw thread type	Thread specification	Extension force Fv(N)			Torque Ma(N.m)		
		8.8 Digress	10.9 Digress	12.9 Digress	8.8 Digress	10.9 Digress	12.9 Digress
Coarse thread	M4	3900	5750	6700	3	4.4	5.1
	M5	6400	9400	11000	5.9	8.7	10
	M6	9000	1320	15500	10	16	18
	M8	16500	24300	28400	25	36	43
	M10	26300	38700	45200	49	72	84
	M12	38400	56500	66000	86	126	145
	M14	62500	77500	90500	135	200	236
	M16	72500	10700	12500	210	310	365
	M18	91000	129000	152000	300	430	600
	M20	117000	166000	195000	425	610	710
	M22	146000	208000	244000	580	820	960
	M24	168000	240000	281000	730	1050	1220
	M27	222000	316000	369000	1100	1550	1800
	M30	269000	384000	449000	1450	2100	2450
Fine threads	M8×1	18100	26600	31200	27	39	46
	M10×1.25	28300	41600	48700	52	76	90
	M12×1.25	43300	63500	74600	93	135	160
	M12×1.5	40800	60000	70000	89	130	155
	M14×1.5	58600	86000	100000	145	215	255
	M16×1.5	79500	116000	136000	226	330	390
	M18×1.5	108000	152000	177000	340	485	570
	M20×1.5	134000	191000	224000	475	680	790
	M22×1.5	166000	236000	276000	630	900	1050
	M24×2	189000	270000	316000	800	1150	1350
	M27×2	246000	350000	409000	1150	1650	1950
	M30×2	309000	440000	515000	1650	2350	2750

3.1 Note

1) Make sure voltage and frequency of the power source comply with those indicated on the manufacture's plate, which is attached to the machine.
2) Power cable and earth connections should conform with local regulations.
3) Use independent power cable and ON/OFF switch. The cable's size should not smaller than those applied in the control box.
4) The power cable connection terminals should be tightened securely.
5) The machine requires a 3-phase 4-wire power source, connect the power lead (L1, L2, L3) to the live wires, and the earth (PE) to the ground.
6) Power supply requirements:
   Main power voltage: +/- 10%
   Main power frequency: +/- 2%

3.2 Installation Place

Please use the right hoisting way.

The feed-in box and mainbody of the granulator is packed separately before leaving the factory. Use a forklift to transport the mainbody to a proper place, then hoist feed-in box onto the mainbody, tight the installation screw up.

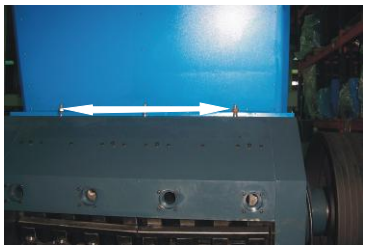
It is not allowed to install the feed-in box onto the main body then hoist them together, because this could damage the machine!

Picture 3-1: Installation drawing

Please make sure there is enough installation space for easier maintenance and repairing.

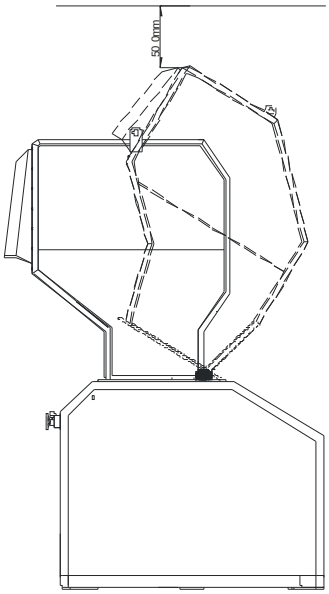
Examine and make sure the installation floor is level and enough intensity when operating.

Use spirit level to adjust the cutting chamber into a level position.



Picture 3-2: Cutting Installation Adjust Drawing

When open the feed box, there should remain at least 500mm safety space



Picture 3-3: Notice of opening feed box

3.3 Install Feed-in Box

1) Open the two front doors of the machine.
2) Hoist the feed-in box and carefully put it onto cutting chamber and match the chamber with its fixed screw holes.
3) Lock up feed-in box screw (torque: 220Nm).

Picture 3-4: Installation Drawing for Feeding Box 1

3.4 Install Feed-in Inlet

Install feed-in inlet after installation of feed box.

1) Open the two front doors of the machine.
2) Hoist the feed-in inlet and carefully put it in front of feed-in box and match the feed box with its fixed screw holes.
3) Lock up feed-in box screw (torque: 45Nm).

Picture 3-5: Installation drawing for feeding box 2

3.5 Installation of Bearing and Blade Rest

1) Lock the right bearing housing to the right box block of the granulating chamber; then, continue to install the right flap.
2) Align the shaft of blade rest with the slot of right bearing housing, and insert the blade rest into the housing.
3) Insert the flap and left bearing housing matching to the shaft of blade rest, and lock it to the left box block.
4) install sealing ring on the right and left bearing housing, and press the ring into the bearing. At the same time, use round-nut to fix the inner ring of bearing.

Note: Add some lubricating oil to both bearing and bearing base.

5) Adjust the right and left clearness of the blade rest shaft, finally install the bearing cover and lock it tightly. The right bearing cover firmly presses the outer ring of bearing to make the right bearing cannot be moved or turned direction.

Picture 3-6: Bearing and blade rest installation drawing

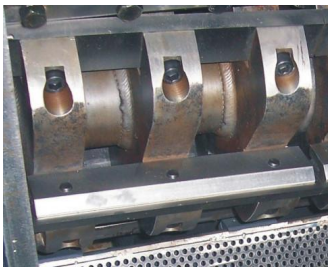
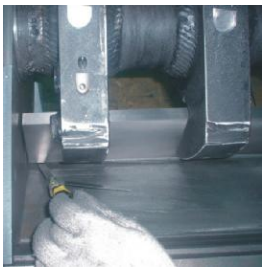
3.6 Installation of Fixed Blades and Rotating

Take care when installing and wear gloves so not to be cut by the sharp knives.

Installation steps:

1) Lay the rotating blades into the blade groove in the blade rest to make them match and then cover the pressing block. Finally, screw the screws down to make the blade not sway. (so to facilitate the space adjusting between fixed blade and rotating blade)
2) Install the front and back pressing blocks on the front and back boxes and leave some space to insert fixed blades. Screw screws down to make the fixed blades not sway.
3) Measure the space between the fixed blade and the rotating blade using a

insertive ruler. The normal space ranges from 0.2~0.3 mm. Adjust if the space is not in this range. Screw down the fixing screws between the fixed blades and the rotating blades.

Picture 3-7: Fixed and Rotating Blade Installation Drawing

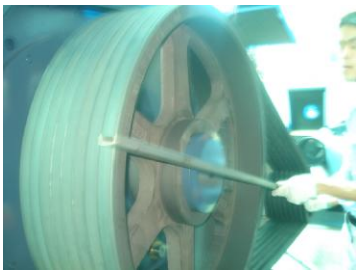
Caution!

Fixed screws must be tightened to avoid cutting and doing harm to machine.

The space between the fixed blade and the rotating blade cannot be too narrow to avoid damaging the cutting tool.

3.7 Installation of Belt Pulley Wheel and Motor.

1) Interpose the key to the key groove and then install the driven wheel.
2) Lay lockup ring in the hole of the driven wheel and make both positions of the hole to match each other then screw the hexagon socket cap screw. (M20mm×50).
3) Adjust the balance of the driven wheel with dial gauge. Stick the dial gauge to the driven wheel and rotate the driven wheel to see whether the value of the in dictator drops within 0~0.1 mm.
4) After balance screw tightly the 3 hexagon socket cap screws. (Torque: 710Nm)
5) Install the driving wheel on the bearing of the motor.
6) Lay lockup ring in the hole of the driving wheel and make both positions of the hole to match each other then screw the hexagon socket cap screw. (M10mm×40) torque: 145Nm.



Picture 3-8: Belt Pulley Installation Drawing

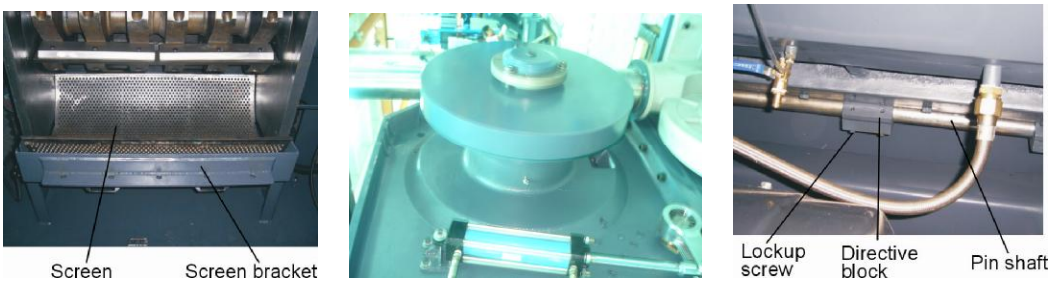
7) Lay the motor on the motor fixing plate and push forward to shorten the space between the driving wheel and the driven wheel.
8) Adjust the balance of the large and small belt wheels: place a level ruler between the large and small belt wheels to observe whether they are aligned. If not, it need to adjust the small belt wheel (Note: the large belt cannot be adjusted any more) to make them balanced.
9) Install the belt, push the motor backward, screw tightly the positioning screw to make the 6 belts to be stressed by equal forces. Tighten the belts and tight up the positioning screw.
10) At last, install the up and low shields of the belt wheel.

Picture 3-9: Motor Installation Drawing

3.8 Installation of Screen, Screen Bracket

1) Put the screen into the screen bracket and put screen bracket under the cutting chamber.
2) Put pneumatic break iron rod along installation holes on both sides of the sideboard to insert the rod into directive block on the screen bracket and lock up the screws on the directive block.
3) Install pneumatic break on its base and lock up the fixing screw. (M12x17 torque: 35Nm)
4) Then mount the pneumatic break iron rod on the pneumatic break.
5) Rotate the left spring dowel of the screen frame to insert it into the screen frame, and make it fixation. At same time, tight up the 5 bolts ahead of the

spring dowel (M16x120, torque is 365Nm).



Picture 3-10: Screen and Screen Bracket Installation Drawing

6) Put up screen bracket by hydraulic pressure system, turn handwheel, make the fixing screw extend into screen bracket till the screw unable turn.

3.9 Connection to Cooling Water

According to machine's label, cooling water should be connected to the machine.

Cooling water level indicator is equipped beside the water tank that behind the back block of the machine and helps check out the water level.

(Note: water level should be lower than 80%)

When discharging the cooling water, first need to open rear door of the machine, insert a water hose into water outlet and drain off the water so to avoid damaging of machine.

3.10 Power Connection

Power connection must be done by the professional electrician.

3.10.1 Check the running direction of the motor

1) Open the door to check whether the feeding box, screen, or storage box has been installed.
2) Close the door.
3) Ensure the main power switch is in ON position.
4) Check the emergency stop.
5) Start the granulator via pressing the START button and stop the granulator via pressing the STOP button.
6) The granulator needs some time to fully come to a halt. After full stop, check

whether the running direction is anti-clockwise.

3.10.2 Check the Running Direction of the Blower

1) Check whether the running direction of the blower is in accordance with the symbol on the shield.
2) Start the blower and stop again to check the blower's running direction.

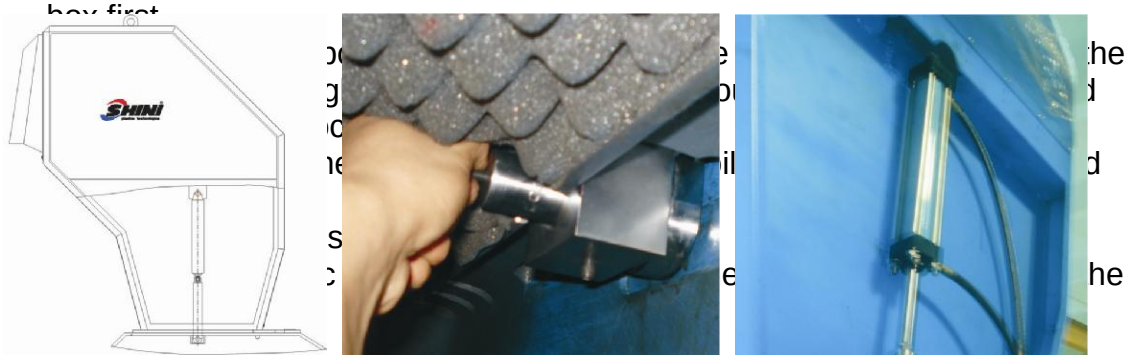
CAUTION!

If the blower's running direction is not in accordance with the symbol, the machine's working capability will be reduced by at least 25 percent. Under these circumstances, please disconnect to the main power and transpose any two wires of the three in the blower.

When equipped with transmission belt: please check the running direction of the transmission belt.

3.11 Connection and Installation of Oil Cylinder

1) The oil cylinder of the collection box has been installation before out factory without treatment for customer.
2) Feed box and the tank is separate installation, so need to disassembly feed box first.



Picture 3-11: Schematic Diagram of the Feed Box oil Cylinder Installation

4. Operation

Please wear earplugs when operating machine so to avoid personal injuries!

Please wear gloves when operating machine so to avoid personal injuries!

Please wear goggles when operating machine so to avoid personal injuries!

Because blades or rotors may be loose, before operating the machine, please check the following items:

1) is there any damage to the knives?

2) is there any loose within the surface of the rotors?

If any above situation has been found, please contact local dealer or SHINI company.

4.1 Startup Pretest

Unpainted part of the machine has been covered with anti-rusted oil. Before use, the anti-rusted oil should be cleaned.

1) Clean with a towel.
2) Wash with a towel dipping with amyl acetate.

4.1.1 Before the First Startup

1) Check whether the granulator is in the level state.
   Note: adjust the machine to make its four holders to share the weight and be in a level state.
2) Check the space (0.2~0.3mm) of between blades to see whether the lockup screws of the blades are tightened (torque is 600 Nm).

4.1.2 After First Startup for 2 Hours

1) Check the space between blades, including the fixed blades and rotating blades again; check whether the lockup screws of the blades are loose.
2) Check the position-adjusting screws of the motor and check whether the position-adjusting screws are tightened.

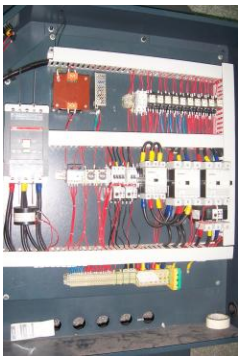
4.1.3 After First Startup for 20~30 Hours

Check and adjust the belt's tensility after a 20~30-hour full-load operation.

4.2 Circuit Connection

The installation of the granulator's circuit must be conducted by the professional electricians.

1) Connect granulator to the power.
2) Connect the transmission belt clockwise.



Picture 4-1: Control Box Drawing

CAUTION!

The blade may be damaged and the granulating capability will be reduced if there is a wrong running direction. Please disconnect the power and transpose any two wires of the three in the main power.

CAUTION!

when check the running direction of the motor, be careful not to let your hands be crushed by belt!

Note!

The granulating capability will be reduced less them 25% if there is a wrong motor running direction. Please cut off the power and transpose any two wires of the three in the left main control box.

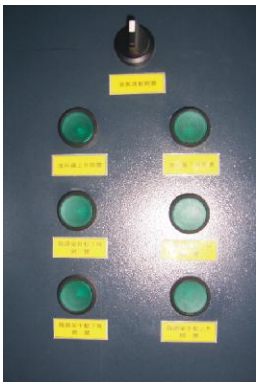
4.3 Open the Feed-in box, Screen Bracket and The Storage Box.

Before opening the feed-in box, screen bracket and the storage box, turn off the main power switch and the power switch of the granulator.

Be careful! The blade is very sharp, please take care.

4.3.1 Open the Feed-in Box

1) Check if the feed-in box has been emptied. If so, turn off the main power switch.
2) Open the feed box by pressing on the electrical handspike button.



Picture 4-2: Starting and Stopping, and Jiggle Switch Drawing of Hydraulic Pressure System

CAUTION!

The feed box is held by electrical handspike to avoid its dropping when opening it.

4.3.2 Open the Screen Bracket and Screen

1) Turn off the power switch of the granulator.
2) Open the front door.
3) Loosen the quick coupling clip at the end of the outlet pipe and transfer it to one side.
4) Loosen the fixing screw of screen bracket.
5) Open the screen bracket slowly by hydraulic pressure system and remove the screen.

Note!

The screen bracket is held by hydraulic pressure system to avoid dropping when opening it.

4.4 Turn Off and Stop the Granulator

The granulator is controlled by main power switch, safety switch, START/STOP button and emergency stop.

Door interlock breaker: the door interlock breaker was installed on the controlling box, the door interlock breaker control the starting and stopping of the machine.

Picture 4-3: Door Interlock Breaker Drawing

START button and STOP button:

These two buttons control the startup and stop of the machine. Emergency stop: When an accident happens, this button can do a favor.

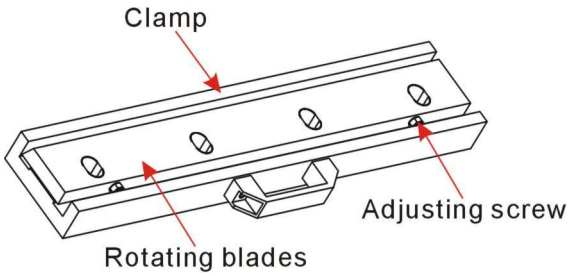
CAUTION:

If there are also ungrinded source materials, the granulator shall NOT be stopped, otherwise the source materials will blockade the rotator and the motor will be overloaded next time you start the machine up.

4.5 Blades Installation Adjusting

All the cutters, including rotating blades and fixed knives, can be adjusted within clamp outside the machine.

Put all the cutters including rotating knives and fixed knives into clamp，adjusting its adjusting screw until the screw reach the clamp.



Picture 4-4：Blades Installation Adjusting

4.6 Timer (Configured with Loading Blower)

After the granulator stops，use timer to prolong the working time of the loading blower to make all the regrind in the storage box get loaded. The time set up varies according to the dia. of the screen mesh hole and the throughput.

Picture 4-5：Timer

5. Trouble-shooting

5.1 The Granulator Can Not Work

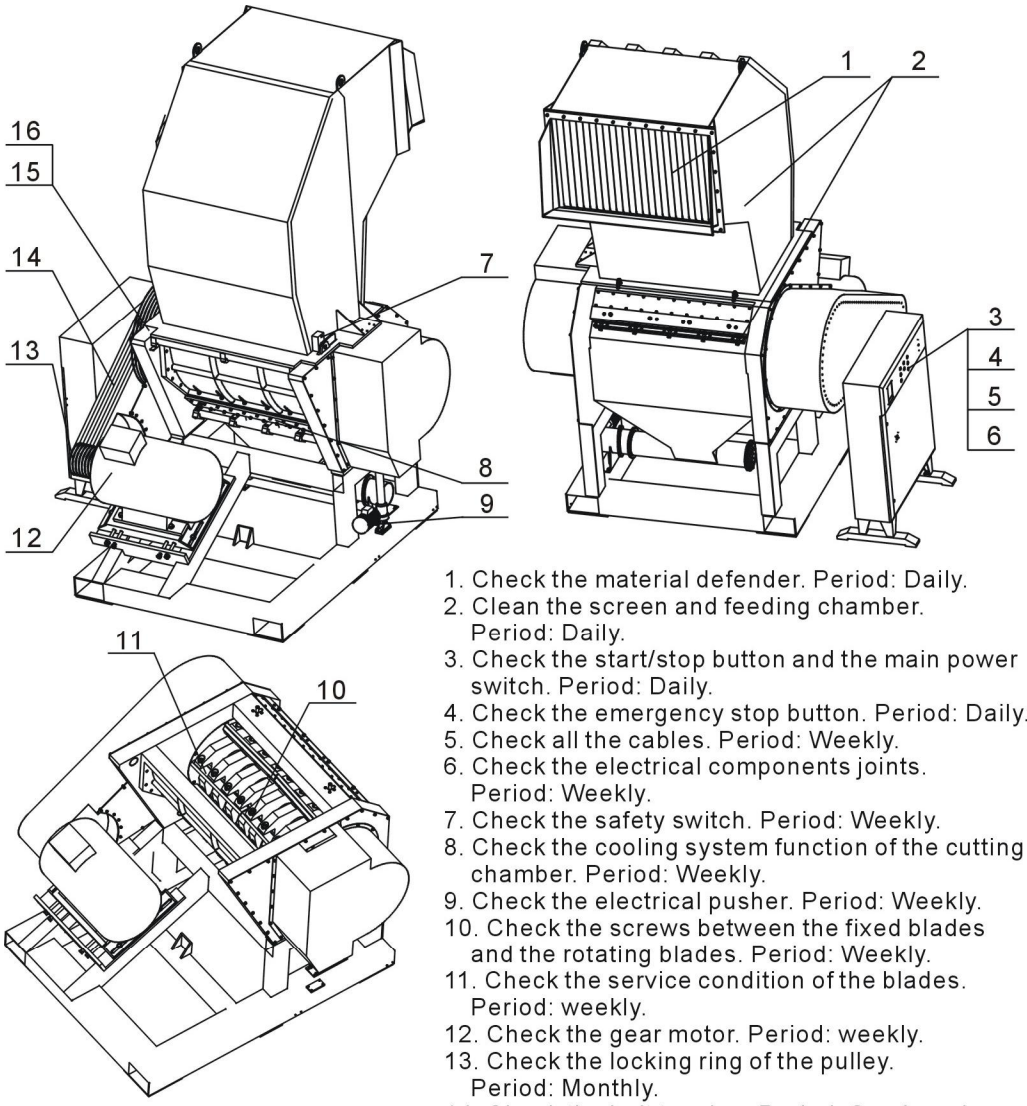
1) Check if the emergency stop has been reset. If not, rotate the button anti-clockwise to reset it.
2) Check whether the door is closed. If not, the machine could not be started.
3) Check if the feeding hopper is completely closed. If not, the machine could not be started. Then, check the lockup clip after opening the door.
4) Check the motor's overload protector. The overload protector in the electrical control box will work if the motor overloads. Under that situation, (A) (the green pole) will come out. Press the Reset button B) to reset it. Before startup again, check whether there is any powder in the granulator.
5) Check the overload protector of the feeding blower's motor. If the feeding blower does not run, the granulator can not run neither. Check the motor protector in the electrical control box. If it is closed, the switch will be in 0 positions. Reset it to 1 position. (A) (The green pole) will come out. Press the Reset button (B) to reset it.
6) Check the space between blades stop will happen or the motor overload protector will trigger off if the blade is very blunt or the space between blades is not correct. More details about checking, replacing and readjusting the blades to see chapter 3.6.

5.2 Stop Due to Other Reasons

Connection failure or looseness of safety switch or limit switch can also result in operational failure.

Note: Do not disconnect to safety switch or control switch.

6. Repair and Maintenance



1. Check the material defender. Period: Daily.
2. Clean the screen and feeding chamber. Period: Daily.
3. Check the start/stop button and the main power switch. Period: Daily.
4. Check the emergency stop button. Period: Daily.
5. Check all the cables. Period: Weekly.
6. Check the electrical components joints. Period: Weekly.
7. Check the safety switch. Period: Weekly.
8. Check the cooling system function of the cutting chamber. Period: Weekly.
9. Check the electrical pusher. Period: Weekly.
10. Check the screws between the fixed blades and the rotating blades. Period: Weekly.
11. Check the service condition of the blades. Period: weekly.
12. Check the gear motor. Period: weekly.
13. Check the locking ring of the pulley. Period: Monthly.
14. Check the belt tension. Period: Semiyearly or every 1000 working hour.
15. Check the shaft, motor and the lubrication. Period: Semiyearly and every 1000 working hour.
16. Check the bearing holders. Period: Semiyearly of every 1000 working hour.

6.1 Repair

All the repair must be done by professionals to avoid damage to machine and harm to human body.

6.1.1 Replace the Blades

CAUTION!

Warning: rotating blades need balanced force. Self rotation exists due to non-balanced forces or unstable barycenter.

Press emergency stop button and turn off main power switch before blades changing.

Wear grooves to avoid being cut and be careful of the sharp blades!

More details about replacing or maintaining the blades to see chapter 3.6 which is about the installation of fixed knives and rotating blades, inject screw thread fixing glue (blue LOCTITE 243 recommended) tighten all fixing screws to fix the screws.

Picture 6-1: Blade Maintenance Drawing

CAUTION!

To decrease the possibility of harm to other people, the replacement action must be conducted by oneself.

CAUTION!

To avoid self rotation, block the rotating blade with a thick wood block. Cutters are very sharp, attention should be paid when block them. After replacement, check whether the screen is damaged. If so, replace the screen.

CAUTION!

Each time to replace the blade, the screw and washer must be replaced

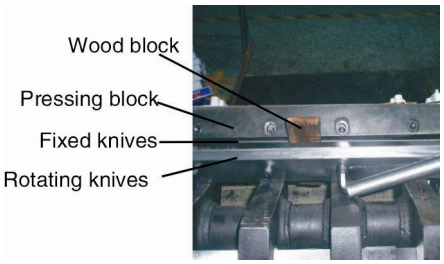
Before replacing the blades, open the door and feed box remove the storage box, screen and screen bracket.

1) Remove the rotating blades

CAUTION!

To avoid self rotation, block the rotating blade with a thick wood block.

1. Remove the screws and washers.
2. Remove the blades.
3. Clean the installation surface of the blades.



Picture 6-2: Change Blade Drawing

2) Remove the Fixed Blades

1. Revolve the screw of the front fixed blade.
2. Loosen and remove the hexagon socket cap screws from the front pressing block.
3. Remove pressing block and blade, clean the blade rest.
4. Loosen and remove the screws of the back blades.
5. Loosen and remove the hexagon socket cap screw from the pressing block again, remove the pressing block and blade. Clean the supporter box.

CAUTION!

Press the pressing block and blade when you remove the last screw to avoid the personal injuries.

3) Install the blades

Clean carefully the fixed blades and rotating blades and then install them.

CAUTION!

Each time to replace the blade, the screw and washer must be replaced First install back and front fixed blades, then install rotating blades. More details about replacing or maintaining the blades to see chapter 3.6.

CAUTION!

Every time when changing the cutters, the blades, pressing block, screw, blades rest and shaft all need to be checked carefully to see if there is any damage.

6.2 Transmission

6.2.1 Daily Maintenance of Transmission Belts

CAUTION!

Press emergency stop button and turn off the main power switch before repairing and maintenance of the transmission belt.

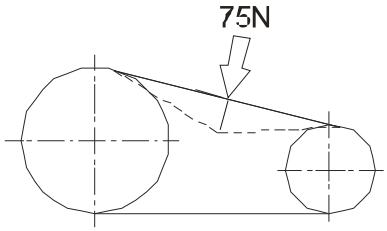
There are 8 transmission belts according to motor power.

1) Check the transmission belts Check transmission belts' tensility after a full-load operation for 20-30 hours. Then check its abrasion condition.
2) Check transmission belts' tensility every 6 months. Remove the right sideboard and transmission belt cover. Rotate the transmission belts for several circles to see if there is any damage or abrasion.

CAUTION!

Do not place your hands between wheels and the belts. to avoid being pinched.

If it is necessary, check the belt's tensility via extra force and measure its excursion. Inflict extra force (75N) in the middle of the belt and this force is determined by power and frequency of the motor. More Details to see the following table.



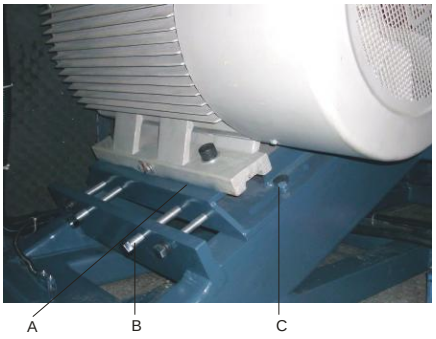
Picture 6-3: Conveying Belt Maintenance Drawing

Table 6-1: Conveying Belt Maintenance Standard List

Motor 50Hz	18.5/22kW	30/37kW	45-55kW
New belt	15mm	14mm	15mm
Old belt (Six - month later)	19mm	19mm	19mm
Motor 60Hz	18.5/22kW	30/37kW	45-55kW
New belt	18mm	17mm	16mm
Old belt (Six - month later)	22mm	23mm	20mm

6.2.2 Adjustment of Transmission Belts

1) Loose four fixing screws (C) on the motor fixing plate (A).
2) Use four active screws (B), change the tensile force by changing the space between big and small wheels.
3) Tight up the active screws (B).
4) Tight up the fixing screws (C).



Picture 6-4: Conveying Belt Adjusted

Recheck the belts' tensility after a full-load operation for 20-30 hours.

Notice!

Four fixing screws'(c) torque are 700Nm.

6.3 Lubrication

6.3.1 Lubricating oils

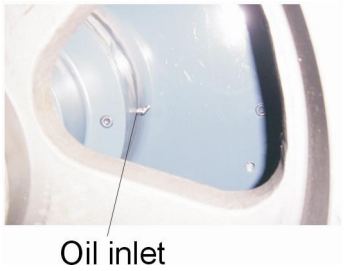
- Xin Chang Long: FX-00

  FX-000

- Bp: BP Grease LGEP 2
- ESSO: Beacon Ep2, Beacon EP2
- Mobil: Mobilux EP2
- Shell: Shell Alvania EP2
- Texaco: Multifak Ep2, Novotex Grease EP2

6.3.2 Please Grease the Bearing with Lubricating Oil Periodically

1) Open the front door of the machine.
2) Inject lubricating oil via oil inlet with a grease gun. If the granulator is not used for a long time, please grease anti-rust oil in blade rest, fixed blades, rotating blades, cutting chamber and screws to avoid rusting.



Picture 6-5: Bearing Oil inlet Drawing

6.4 The Using Life of the Key Parts

Table 6-2: The Using Life of the Key Parts

Name of the parts	Using life
Motor	5 years
Bearing	40000 hours
Circuit breaker	10,0000 times

6.5 Maintenance

When carrying out maintenance, ensure that there is no material left in the granulator.

CAUTION!

All stuff concerning repair must be conducted by professionals to avoid damage or harm to human body.

6.5.1 Daily Check

1) There is rubber shutter in the feed-in box. If the rubber shutter is damaged, replace it immediately. Otherwise the fragment of the shutter will damage the blades in the cutting chamber.
2) Check whether the Emergency Stop works properly. Start the machine and then stop it via Emergency Stop. Rotate the button anti-clockwise to reset the Emergency Stop.

6.5.2 Weekly Check

1) Check the power wire to see whether there is any damage. If so, replace it immediately.
2) Check the safety switch.
3) Check the function of the electrical handspike which is used to open the feed box.

6.5.3 Monthly Check

1) Check the belt to see whether there is some damage. Check the belt's tensility every 6 months. More details to see chapter 6.2 Transmission.
2) Check the blades and screws to see if they get loose.

6.6 Cleaning

CAUTION!

The blade may do harm to human body when opening the feeding hopper!

1) Check whether the feed-in box is emptied before stopping the machine.
2) Clean the exterior surface of the feed box.
3) Open the front door first, then the back door, push forward to open the feed box.
4) Turn off the main power switch.
5) Clean the check board of the feed box with dust separator.

Note!

The feed-in box is held by electrical handspike, therefore it cannot fall down.

6) Clean the interior surface of the feeding hopper.
7) Remove the connecting pipe.
8) Loosen the fixing screw of screen bracket and open the screen bracket.
9) Take out the screen.
10) Loosen the hole base of screen bracket and remove the screen bracket.
11) Clean screen bracket and screen.
12) Clean both surfaces of the cutting chamber.
13) Clean every loading pipe, blower, and cyclone dust separator.
14) Clean the wheels with bright dust-precipitator.

Reinstall after cleaning

CAUTION!

Take care not to be squeezed when closing the door!

1) Install screen into screen bracket and put screen bracket under the cutting chamber.
2) Put pneumatic break iron rod along installation holes on both sides of the side board to insert the rod into directive block on the screen bracket and lock up the screws.
3) Install pneumatic break on its base and lock up the fixing screw. (M12x17 torque: 35Nm)
4) Mount the pneumatic break iron rod on the pneumatic break.
5) Turn the spring dowel on both ends of the storage box to fix the storage box.
6) Install quick coupling clip at the end of the outlet pipe.

7) Shut off the feed-in box

Note!

Before closing the feed-in box, the door must be open; check if there is any residual powder left in the interface and edges; close and fix the feed-in box with pothook.

8) Install the plastic shutter of the feed box.

9) Close the door.

10) Check if the feed box is emptied.

11) Open the main power switch.

12) Start the machine.

6.7 Repair and Maitenance Record

6.7.1 About the Machine

Model _____ SN _____ Manufacture date _____

Voltage_____Φ_____V Frequency _____ Hz Power _____ kW

6.7.2 Check After Installation

☐Check if pipe connections are firmed locked by clips.

☐Check the gap between fixed blade and rotating blade. (0.2~0.3mm).

☐Check the rotating balance of the belt wheel.

Electrical Installation

☐Voltage: _____V _____ Hz

☐Specs of the fuse: 1 Phase _____ A 3 Phase _____ A

☐Check phase sequence of the power supply.

☐Check the rotating direction of the conveying blower.

6.7.3 Daily Check

☐Check main power switch.

☐Check emergency stop button.

☐Check start / stop button.

☐Check material check plate (strip) is perfect or not.

☐Check whether emergency stop and safety switch works normally.

- [ ] Clean screen and feeding hooper.
- [ ] Check whether start, stop and power switches are normal.

6.7.4 Weekly Check

- [ ] Check all the electrical cables.
- [ ] Check if there are loose connections of electrical components.
- [ ] Check the start and stop function of the electrical handspike
- [ ] Check function of all the safety switch
- [ ] Check the cooling system of the cutting chamber
- [ ] Check blade condition.
- [ ] Check whether set screws in fixed and rotate blades are under looseness.
- [ ] Check if there is abnormal noise, vibration and heat in reduction gear.
- [ ] Check the cracking window

6.7.5 Monthly Check

- [ ] Check the status of the belt.
- [ ] Check the overload protection function of the motor.
- [ ] Check motor reversed running function.
- [ ] Check the tightness of the blades.
- [ ] Chech the pneumatic stick
- [ ] Check start/stop delay function of the conveying motor
- [ ] Check whether clamp ring of pulley is fastened.
- [ ] Check belt tension.

6.7.6 Check Half-yearly or Every 1000 Running Hours

- [ ] Check belt tension
- [ ] Check the bearings, motor and shaft lubrication
- [ ] Check the shaft holder
- [ ] Valuation of machine performance

6.7.7 3 year Checking

- [ ] PC board renewal.
- [ ] No fuse breaker renewal.