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# **Operation Manual**

#### **WARNING**

To prevent electric shock or fire, please strictly abide by the procedures in the operation manual.

The machine only for the specialized persons, please do not let other people operate. If any violation of the instructions operation and cause personal injury or machine damage, our company disclaim all responsibility.

The machine can only maintain by the people who has the certification.

#### THANKS TO THE BUYER

Great thanks for buying the series of diamond drill of . Please read operation manual and must pay attention to safety precaution.

The right operation, will make you fully feel our products superior performance.

Please put this manual in a safe place for future reference.

#### **ABOUT THIS MANUAL**

2050(E)

The machine model of the description in this manual:

2350(E)

The following model options in oil. 2550C(E) 2550(E) 2550B(E) 2550BC(E) 3050(E) 3050C(E) 3050B(E) 3050BC(E) 3550(E) 3550C(E) 3550B(E) 3550BC(E) 4050(E) 4050C(E) 4050B(E) 4050BC(E) 4550(E) 4550C(E) 4550B(E) 4550BC(E) 5050(E) 5050C(E) 5050B(E) 5050BC(E)

3050/3C(E) 3550/3C(E) 4050/3C(E) 4550/3C(E) 5050/3C(E)

Confirm the machine model according to the nameplate.





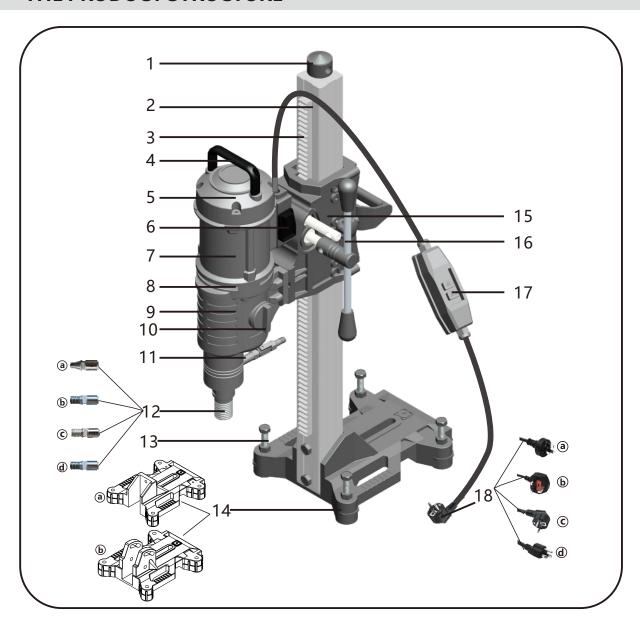
1800(E)







### THE PRODUCT STRUCTURE



1.Top 10.Shift knob 2.Column 11.Water tap 3.Rack 12.Principal axis

4. Handle 13. Regulating screw

5.Cover 14.Base (a.ordinary b.angle adjustable)

6.Power switch 15.Lifting device 7.The stator shell 16.Lift handle 8.The middle cover 17.PRCD

9.Gear box 18.Plug (a.CN b.GB c.EP d.US)

#### TECHNICAL PARAMETER

MOD.	Rated voltage(V)	Rated power(W)	Rated frequency(Hz)	The correspond	ding speed(rpm)	Maximum drilling(mm)
1800 1800E	110/220~	3800	50-60	700	100-700	180 (7 ")
2050 2050E	110/220~	4000	50-60	680	100-680	205 (8 ")
2350 2350E	110/220~	4180	50-60	650	100-650	235 (9 ")
2550 2550B 2550QA	110/220~	4350	50-60	600		255 (10 ")
2550E 2550BE	110/220~	4350	50-60	100-600		255 (10 ")
2550BC 2550C	110/220~	4350	50-60	570/890		255 (10 ")
2550CE 2550BCE	110/220~	4350	50-60	100-570/8	390	255 (10 ")
3050 3050B	110/220~	4650	50-60	490		305 (12 ")
3050E 3050BE	110/220~	4650	50-60	100-490		305 (12 ")
3050BC 3050C	110/220~	4650	50-60	480/750		305 (12 ")
3050CE 3050BCE	110/220~	4650	50-60	100-480/7	750	305 (12 ")
3050/3C 3050/3CE	110/220~	4650	50-60	100-440/6	550/870	305 (12 ")
3550 3050B	110/220~	4880	50-60	390		355 (14 ")
3550E 3550BE	110/220~	4880	50-60	100-390		355 (14 ")
3550BC 3550C	110/220~	4880	50-60	440/600		355 (14 ")
3550CE 3550BCE	110/220~	4880	50-60	100-440/6	500	355 (14 ")
3550/3C 3550/3CE	110/220~	4880	50-60	100-410/	580/800	355 (14 ")
4050 4050B 4050QA	110/220~	5180	50-60	340		405 (16 ")
4050E 4050BE	110/220~	5180	50-60	100-340		405 (16 ")
4050BC 4050C	110/220~	5180	50-60	340/530		405 (16 ")
4050CE 4050BCE	110/220~	5180	50-60	100-330/	500	405 (16 ")
4050/3C 4050/3CE	110/220~	5180	50-60	100-330/	500/660	405 (16 ")
4550 4050B	110/220~	5280	50-60	290		455 (18 ")
4550E 4550BE	110/220~	5280	50-60	100-290		455 (18 ")
4550BC 4550C	110/220~	5280	50-60	300/470		455 (18 ")
4550CE 4550BCE	110/220~	5280	50-60	100-290/4	130	455 (18 ")
4550/3C 4550/3CE	110/220~	5280	50-60	100-290/4		455 (18 ")
5050 5050B	110/220	5380	50-60	280		505 (20 ")
5050E 5050BE	110/220~	5380	50-60	100-280		505 (20 ")
5050BC 5050C	110/220~	5380	50-60	280/420		505 (20 ")
5050CE 4050BCE	110/220~	5380	50-60	100-280/4	120	505 (20 ")
5050/3C 5050/3CE	110/220~	5380	50-60	100-280/4		505 (20 ")

For the continuous improvement of products, the company reserves the right to change the technical data without prior notice.

#### TECHNICAL CHARACTERISTIC DESCRIPTION

The above series of drilling machine can only be installed on the frame to use. This machine is applicable to the trained professionals to operate, in the rock, concrete, asphalt materials such as drilling or coring. If drilling diameter is morethan 250mm, you must use the high performance expansion bolt. Diamond bit, is a hollow tubular drill at the front end of welding (or sintering) up with diamond segments. If necessary, the cooling water can be collected through a special device.

Note: when using electric tools, to avoid the risk of electric shock or fire, please follow the rules for safe operation.

Please read carefully before operating the machine, keep this manual in a safe place.

- 1.Keep working place cleanb. An untidy working area will increase the risk of accidents.
- 2.Take ambient conditions into account.Do not expose power tools to rain.Do not use power tools near gas source.
- 3. Protect yourself against electric shock. Avoid physical contact with earthed parts, e.g. Pipes, heaters, ovens and fridges.
- 4.Keep children well away.Do not let unauthorized persons touch the cool or cable and keep them well away from your working area.
- 5.Keep your power tool safely.Tools not in use should be kept in dry,locked locations and away from children.
- 6.Do not overload your power tools. They will work better and more safely in the given performance range.
- 7. Wear suitable working clothing. Do not wear loose clothing or jewelry, otherwise you may be caught by moving parts. When working in the open rubber gloves and non-slip shoes are recommended. Cover long hair with a hair net.
- 8.Connect a dust extraction facility to power tool if this is possible and satisfy yourself that it is working properly.
- 9.Do not use the cable for any other purpose.Do not carry the tool by the cable and do not use it to pull the plug from the socket.
- 10.Do not bend too far over. Avoid an abnormal body position. Make sure you are standing safely and always keep you balance.
- 11.Take good care of you power tools. Keep them sharp and clean so that they work better and more safely. Follow the maintenance instructions and information when changing a tool. Check the cable regularly and have it renewed by a qualified expert if it is damaged. Check the extension cable regularly and replace it if it is damaged. Keep the handle dry and free of oil and grease.
- 12.Remove the mains plug from the power supply when not in use, before servicing and when changing the tool.
- 13.Do not allow any tool spanner to remain on the tool.Before switching on,make sure that spanners have been removed.
- 14. Avoid unintended startup. Do not carry any power tool which is connected to the eletricity while your finger is at the switch. Ensure that the switch is off before plug in .

- 15. When working in the open, use only authorized extension cable which are identified for such use.
- 16.Always be alert, Observe your work. Proceed with care and do not use the power tool if you can't concentrate.
- 17.Check your machine regularly.Before using the power tool again, you must check carefully that protective devices or damaged parts are functioning correctly, that they are not sticking, that no parts are broken, that all other parts are correctly and perfectly fitted and that all other conditions which could influence the operation of the machine are safe and correct. Damaged protective devices and parts should be repaired or changed at a customer service work shop, unless otherwise indicated in the operating instructions. Damaged switches must be replaced at a customer service workshop. Do not use power tool if the switch can't be switched on or off.
- 18.Attention:For your good, please only use the accessories and additional equipment fromoriginal supplier. The use of other accessories may cause damage to the tod and the operator

#### **PREPARATION**

Please follow the steps below, assemble and connect the core drill machine. You can do this works with tools attached with the machine.

ATTENTION: You must make sure that the motor's switch is off when connecting up the power supply.

Step 1:Unwrap the package, check the machine and accessories according to the packing list. Satisfy yourself that the machine has not been damaged in transit. Check that the voltage is the same as the voltage indicated on the rating plate. Check all the parts according to the packing list.

#### Step 2:Electrical connection

According the European standard EN 61029-1 and IEC 1029-2-6, the electrical connection of diamond core drills with water supply must be operated via a residual current device and to a properly earthed socket. In accordance with these regulations, our products is fitted with an PRCD. This contains both RCD protection and under voltage tripping. The PRCD must be switched on using the ON key after the power plug has been inserted into the socket. In the event of a voltage drop, the PRCD will switch off and must then be switched on again once the power supply has been reestablished. The rated current, i.e. The rated current for the PRCD switch off, is 30 mA.

ATTENTION: the PRCD must not lie in water. It must be checked for perfect function at regular intervals by pressing the TEST key.

Never operate a diamond core drilling machine without PRCD.

STEP 3 water connection.

Use the attached accessries "Quick connector" to connect the water hose to the water supply system.

ATTENTION:Use only clean water, as dirty water will cause the seals wear very quickly. Max. Water pressure 3 bar.

Step 4 Safety test

After having switch on the motor starts softly. Press "TEST" button on the PRCD, the motor stop immediately. Press RESET button on the PRCD to supply electricity again.

ATTENTION: Do not operate the machine if the PRCD goes wrong.

#### **PUTTING INTO OPERATION**

1. Select suitable diamond drill bits.

Our products have 4 kinds of thread, only use suitable high quality diamondtools, use sharp tools and ensure that the diamond segments are sufficiently larger than the inner and outer diameter of the drill bit tube. Apply water-resistant grease to the tool thread so that the tool can be easily loosened. Ensure that the radial run out at the diamond segments of the drill bit is no greater than 1mm (eccentricity.)

2. Fix the rigs to the working place

Fixing methods:bolt fixing, vacuum fixing, bracing. The most common method of fixing is dowel fixing. Use metal bolt if possible. The diameter of the bolt must be at least 12mm. With vacuum fixing, ensure there is a sufficiently great suction. Make sure that the sealing ring are not worn out. Ensure that the rig is only rigid when the sealing ring is relaxed via jack screws on the base of the rig.

Note: We strongly recommend the use of the expansion bolt is fixed, and as the location of the expan-sion screwThe column is the best direction. the company doesnot assume any responsibility for result from unfirn fixation.

3.start drilling

Fix the drill bit, connect the power and water supply, move adjusting tools, switch on when the drill machine is no load, check the drill bit and sound, if everything is fine, then open the water tap, the machine can start to drill when water flow from the drill bit.

Take it slow when at first, when the drill bit cut in the wall, change to normal speed. Slow down when the drill machine run into steel.

Both mechanical and electronic protections exist in drill machine. When drilling, if the motor is working, while the drill bit is not moving, means the drill bit need

sharpened or feeding

speed is too fast, please pull out the drill bit then re-feed. If the motor stop when drilling, please return on the machine and slow down the feed speed.

#### FRICTION CLUTCH

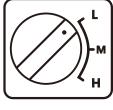
The integrated friction clutch protects operating personnel, when the machine and the tool against high mechanical overloads, please ensure that the release time of the clutch is not more than 3-4 seconds, otherwise wear and heat will increase rapidly.

#### MAINS SWITCH AND INTEGRAL OVER CURRENT PROTECTION

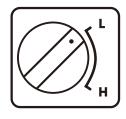
After having switch on the motor starts softly. If the machine is being overloaded, the motor electronic switchs over to the pulsating operation for showing the operator the overload. If the force is then not reduced, the motor switches off after a few seconds. After switching the machine off and on again, the motor start again softly. Before switching the machine on again, ensure that the drill bit can be turned easily and is not jammed in the drill hole. The motor can bear highest on 260 Volt. Higher voltages however can cause irreparable damages. Please note that when supply power via a generator, this does not generate higher voltage peaks than 260 V.

#### **GEAR CHANGE**

Gear change

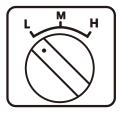


**Three** 

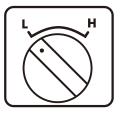


Two

Oil bath



Three



Two

In order to improve the drilling efficiency, some models with three shift gear.

There are high, medium and low-grade, high speed file (H file) for small bits and soft materials; medium file (M file) for medium bit and hard materials; low profile (L profile) for Drill and hard materials.

Shift when the machine stops or will stop.

Shift in place. If the spindle does not rotate or there is some noise after starting up, the gear may not shift in place. Turn off the machine immediately, and then shift the gear to proper place, rotate the spindle back and forth (easy to shift) at the same time till shift in place. Do not shift when the machine is full-speed operated, over load or stuck.

L is for low speed, H is for high speed and, M is for medium speed. The drawing is for low speed. Low speed to high speed, turn the knob clockwise, otherwise, anti-clockwise.

#### **OIL BATH ADVANTAGE**

Oil immersed type diamond drilling machine is a kind of drill for the reinforced concrete, brick, stone, ceramic and refractory materials, It is Suitable for equipment installation, installation of water and electricity, tunnels and other construction, installation. Oil immersed type diamond drilling machine gear oil has a very good pressure, when gear meshing friction surface temperature is high enough, It can react chemically with the gear surface, form metal film strength strong critical shear, preventing gear surface wearing.

The friction losses, greatly improving the service life of the gear. The bearing capacity of gear oil is high, is conducive to the tooth surface protection. At the high temperature it can guarantee the reliable lubrication of the gear. Viscosity temperature performance is good with the variation of working temperature, it ensures a sufficient liquidity at low temperature, ensure the liquid oil to the tooth surface and bearing friction loss, prevent, Injury. In the high temperature viscosity does not decrease too much, can form a lubricating oil sufficiently thick enough.

### **TROUBLE SHOOTING**

Problems	Cause	Solution	
	Dower supply was sutted off plug failed or loosed	Check the power supply,check the	
Motor	Power supply was cutted off,plug failed or loosed.	plug and switch	
does not	Carbon brush jammed, or escaped from the commutator	Resetting the carbon brush	
work	PRCD protection works	Press RESET button on the PRCD	
	PRCD goes wrong	Change PRCD	
	Drill bit worn out	Change drill bit	
	Feeding pressure too low	Use greater pressure	
		Clean drill bit with enough water	
	Drill bit segment were pasted by the chips	supply.Change to the next lower	
		gearstep.	
Drilling	Too high speed	Use a greater pressure and next	
slowly	100 mgm speed	lower gear.	
3.0,	Drilling through iron reinforcements	Clean the bore hole with enough	
	Drining through non-remoreements	water supply	
	Too much chip in the bore hole	Check the ball valve,check the	
		water flow.	
	Less water supply or water leakage.Drill bit becoming	Resharpen the drill bit again by	
	glazed	SIC grindstone.	
	Rebar chip or concrete block was jammed between the	Switch the machine off,loosen the	
	tube and the core or the hole wall.	drill bit by turning right and left	
Drill bit		using a suitable wrench	
jam	Rig fixing not steady enough,it goes out of the original	Refixing the rig	
	position		
	Too much gap between the column and the carriage	Adjust the gap to better condition	
Wall of	Drilling spindle does not straight	Repair or change the spindle	
drill bit	Drill bit does not straight	Change the drill bit	
wearing	Abrasive chip can not be flushed out	Set enough water supply	
quick			
Water	Determ aboft and warm and	Channa tha natani shaft and	
supply	Rotary shaft seal worn out	Change the rotary shaft seal	
leakage			

#### MAINTENANCE AND REPAIR

# ATTENTION: You must remove the main plug from the supply socket before beginning any maintenance or repair work.

Clean the machine with a dry or moist cheaning-rag and not with a jet of water. Make sure that no water gets into the motor or the switch box. Ensure that the ventilation slots are always clean. Clean and greases the spindle thread, too.

#### Oil bath gear

The gear oil should be changed after the first 300 hours of operation. Ensure that this work is carried out in a specialist workshop, or proceed as follow: Clamp the machine vertically in the vice. Remove the three hexagon socket screws. Take off motor and inter-mediate cover. Change gear oil-use only original oil..To reassemble, proceed vice vesa and ensure that the shim ring is on the front shaft.

### ATTENTION: if gear oil leak, stop the machine immediately. Leakage of oil damages the gear. Water sedring

If water escapes from the overflow hole on the water connection ring, the rotary shaft seals must be replace immediately. This should only be done in an authorized specialist workshop. Carbon brushes

The carbon brushes should be examined for wear after about 300 hours in operation, and replaced if necessary. As with all other work on the motor, should only be carried out by an electrician.

#### WARRANTY

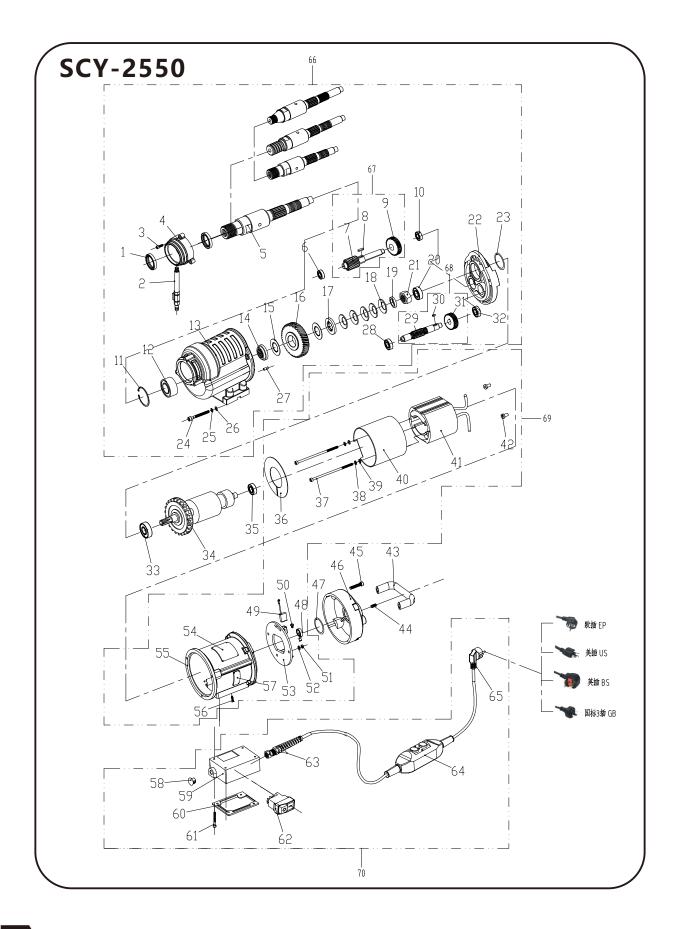
We warrants all products manufactured or sold by it against defects in workmanship or materials for period of 12 months from the date of shipment to the customer. Please contact our factory or the authorized repair shop in your local area for replacement or repair of defective parts.

This warranty does not cover normal wear and tear, overloading, non-compliance with the operating instruction and intervention by unauthorized persons or the use of parts from other companies.

\*We don't take responsibility for accidents caused if that machine is not fixed by well

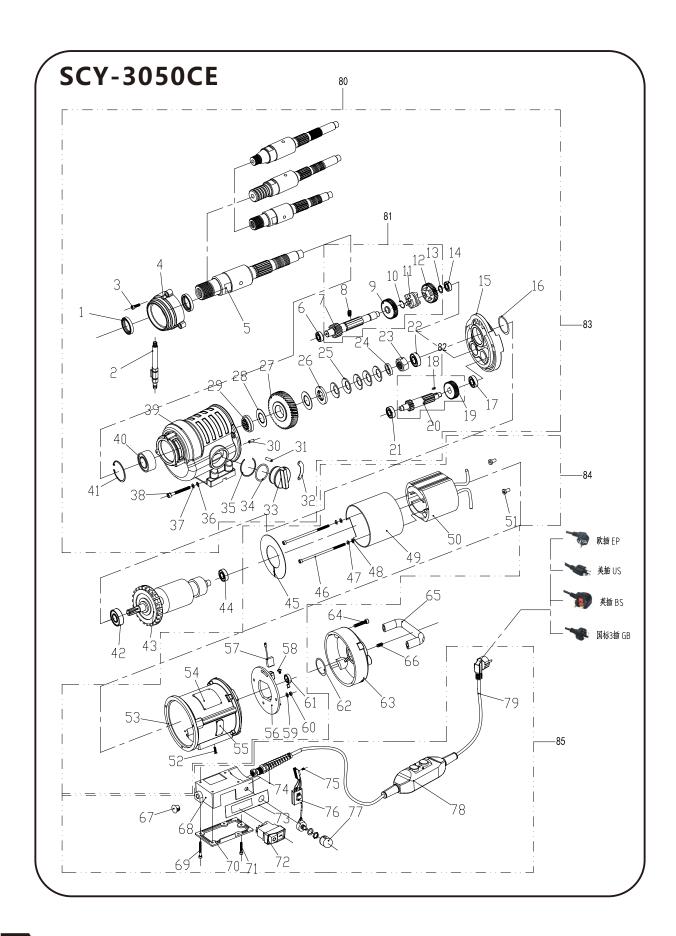
NO.	Parts name	QTY
1	Water seal 40 * 50 * 7	2
2	Hose faucet 200A-EU	1
3	Hegonal screw M5 * 18	3
4	Watershed 250B	1
5	Spindle 250A	1
6	Bearing 6202	1
7	Class II tooth shaft 250A-4(14)	1
8	Marketing 4 * 16	1
9	Class II gear 250A-3	1
10	Bearing 6001	1
11	Inner card 52	1
12	Bearing 3205	1
13	Gear box 250B-1	1
14	Hand-key pad 250A	1
15	Separation film 200A	2
16	Spindle gear 250A-5(14)	1
17	Flesh iron 200A	1
18	Curved bullet pad 200A	5
19	Iron Ring 200-1	1
20	Bearing 6202	1
21	Nut 200A	1 1
22	Middle cover 250B-1	1
23 24	O-ring φ 35 * 2	4
25	Hegonal screw M6 * 55 Pad M6	4
26	Pad M6	4
27	Cylinder pin 4 * 12	1
28	Bearing 6201	1
29	Class I tooth shaft 250A-2	1
30	Marketing 4 * 10	1
31	Class I gear 200A-1(7)	1
32	Bearing 6201	1
33	Bearing 6202	1
34	Rotor SCY-2550	1
35	Bearing 6201	1
36	Breeze 200A	1
37	Hegonal screw M5 * 105(half tooth)	2
38	Pad M5	2
39	Pad M5	2
40	Interior 200A	1
41	Stator SCY-2550	1
42	Insulation sleeve 200A	2
43	Hand 200 A.	1
44	Heptagonal top wire M6 * 6	1
45	Hegonal screw M6 * 35	6
46	Top 200A	1
47	O-ring φ 38 * 3.1	1
48	Bypass 200A	2
49	Carbon Brush 200A	2
50	Round Head Cross Screw M4 * 8(Coppe	
51	Loose nut M5	2
52	Pad M5	4
53	Brush frame 200A	1

NO.	Parts name	QTY
54	Parameter Card SCY(70 * 50)	1
55	Stator hull 200A	1
56	Cross level screw M4 * 8	1
57	Brand 40-80	1
58	Button head SKT-10	1
59	Switch Box 200A-FS	1
60	Switch Box Cover 200A-FS	1
61	Hegonal screw M4 * 50(half tooth)	4
62	Electromagnetic switch KJD17	1
63	Fold proof connector M16 * 1.5	1
64	Leakage protector PD16	1
65	Power cord 3 * 1.0 * 3.5 M	1



NO.	Parts name	QTY
1	Water seal 40 * 50 * 7	2
2	Hose faucet 200A-EU	1
3	Hegonal screw M5 * 18	3
4	Watershed 250B	1
5	Spindle 250A	1
6	Bearing 6202	1
7	Class II gear axis 250A/2 -6(12)	1
8	Ball head plunger M8 * 15	1
9	Type II High Speed Gear 250A/2 -5	1
10	Stop Ring 18	1
11	Class II sliding gear 250A/2 -4	1
12 13	Type II low-speed gear 250A/2 -3 Card 16	1 1
14	Bearing 6001	1
15	Middle cover 250B-1	1
16	O-ring φ 35 * 2	1
17	Bearing 6201	1
18	Marketing 4 * 10	1
19	Class I gear 200A-1(7)	1
20	Class I tooth axis 250A/2 -2	1
21	Bearing 6201	1
22	Bearing 6202	1
23	Nut 200A	1
24	Iron Ring 200-1	1
25	Curved bullet pad 200A	5
26	Hand-key pad 200A	1
27	Spindle gear 250A-5(12)	1
28	Separation film 200A	2
29	Hand-key pad 250A	1
30	Cylinder pin 4 * 12	1
31	Cylinder pin 5 * 25	1
32	File plate 250A/2	1
33	Dialing knob 250B	1
34	O-ring φ 41 * 3.1	1
35	Stop ring φ 44	1
36	Pad M6	4
37	Pad M6	4
38	Hegonal screw M6 * 55 Gear box 250B-1	4 1
39 40	Bearing 3205	1
41	Inner card 52	1
42	Bearing 6202	1
43	Rotor SCY-3050CE	1
44	Bearing 6201	1
45	Breeze 200A	1
46	Hegonal screw M5 * 105(half tooth)	2
47	Pad M5	2
48	Pad M5	1
49	Interior 200A	1
50	Stator SCY-3050CE	1
51	Insulation sleeve 200A	2
52	Cross level screw M4 * 8	1
53	Stator hull 200A	1

NO.	Parts name	QTY
54	Parameter Card SCY(70 * 50)	1
55	Brand 40-80	1
56	Brush frame 200A	1
57	Carbon Brush 200A	2
58	Round Head Cross Screw M4 * 8(Copper)	2
59	Pad M5	4
60	Loose nut M5	2
61	Bypass 200A	2
62	O-ring φ 38 * 3.1	1
63	Top 200A	1
64	Hegonal screw M6 * 35	6
65	Hand 200 A.	1
66	Heptagonal top wire M6 * 6	1
67	Button head SKT-10	1
68	Switch Box 200A-T-FS	1
69	Hegonal screw M4 * 50(half tooth)	4
70	Switch Box Cover 200A-T-FS	1
71	Hegonal screw M4 * 25	1
72	Electromagnetic switch KJD17	1
73	Speed adjustment label SCY	1
74	Fold proof connector M16 * 1.5	1
75	Round Cross Screw M4 * 6	1
76	Governor SCY20504050(A)	1
77	Speed control knob KN-8D	1
78	Leakage protector PD16	1
79	Power cord 3 * 1.5 * 3.5 M	1



NO.	Parts name	QTY
1	Water seal 40 * 50 * 7	2
2	Hose faucet 200A-EU	1
3	Hegonal screw M5 * 18	3
4	Watershed 250B	1
5	Spindle 250A	1
6	Bearing 6202	1
7	Class II tooth axis 250A/3 -6(12)	1
8	Ball head plunger M8 * 15	1
9	Type II High Speed Gear 250A/3 -5	1
10	Stop Ring 18	1
11	Class II sliding gear 250A/3 -4	1
12	Type II low-speed gear 250A/3 -3	1
13	Card 16	1
14	Bearing 6001	1
15	O-ring φ 35 * 2	1
16	Middle cover 250B	1
17	Bearing 6201	1
18	Class I gear 200A-1(7)	1
19	Marketing 4 * 10	1
20	Bearing 6201	1
21	Class I tooth axis 250A/3 -2	1
22	Bearing 6202	1
23	Nut 200A	1
24	Iron Ring 200-1	1
25	Curved bullet pad 200A	5
26	Flesh iron 200A	1
27	Spindle gear 250A-5(12)	1
28	Separation film 200A	2
29	Hand-key pad 250A	1
30	Gear box 250B	1
31	Bearing 3205	1
32	Inner card 52	1
33	Hegonal screw M6 * 55	4
34	Pad M6	4
35	Pad M6	4
36	Cylinder pin 4 * 12	1
37	Stop Ring 44	1
38	O-ring φ 41 * 3.1	1
39	Cylinder pin 5 * 25	1
40	Dialing knob 250A	1
41	File plate 300A/3	1
42	Bearing 6202	1
43	Rotor SCY-3050 / 3CE	1
44	Bearing 6201	1
45	Breeze 200A	1
46	Hegonal screw M5 * 105(half tooth)	2
47	Pad M5	2
48	Pad M5	2
49	Interior 200A	1
50	Insulation sleeve 200A	2
51	Stator SCY-3050 / 3CE	1
52	Stator hull 200A	1
53	Parameter Card SCY(70 * 50)	1
55	. Grameter Cara Ser (10 So)	•

NO.	Parts name	QTY
54	Carbon Brush 200A	2
55	Round Head Cross Screw M4 * 8(Copper)	2
56	Hegonal screw M6 * 35	6
57	Hand 200 A.	1
58	Heptagonal top wire M6 * 6	1
59	Top 200A	1
60	O-ring φ 38 * 3.1	1
61	Bypass 200A	2
62	Loose nut M5	2
63	Pad M5	4
64	Brush frame 200A	1
65	Brand 40-80	1
66	Cross level screw M4 * 8	1
67	Button head SKT-10	1
68	Switch Box 200A-T-FS	1
69	Switch Box Cover 200A-T-FS	1
70	Hegonal screw M4 * 50(half tooth)	4
71	Hegonal screw M4 * 25	1
72	Electromagnetic switch KJD17	1
73	Speed adjustment label SCY	1
74	Fold proof connector M16 * 1.5	1
75	Round Cross Screw M4 * 6	1
76	Round Cross Screw M4 * 6	1
77	Speed control knob KN-8D	1
78	Leakage protector PD16	1
79	Power cord 3 * 1.5 * 3.5 M	1

