



STEP DD19A BATTERY POWERED PLASTIC STRAPPING TOOL (Manual)



41211710 Manual UK 200821
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COMPANY INTRODUCES

"We believe packaging solutions for our customers should be simple, easy to use, ergonomic and sustainable.

We offer a wide range of packaging products and solutions, and web design and engineer production lines specifically built to your needs.

Our motto is simple: Sal-Tech Easy Packaging makes your life simpler through engineering and good design, and your job less stressful. We Keep Things Together."

Gunnar Salbæk
Owner/CEO

About Sal-Tech

Sal-Tech Easy Packaging offers a wide range of solutions for simple and reliable packaging of your products.

If it is a standard or a special solution that's needed for your assignment, we have a creative input to solve your needs, securing you an up to date packaging application.

Sal-Tech Easy Packaging is 100% owned by Gunnar Salbæk,

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1. SAFETY INSTRUCTION

Please read the matters carefully, if not follow this prompt, it is possible to cause operator injury during operation.



1.1 Battery operation

Environmental protection:

- 1) Please do not put used batteries into household trash can, waste water tank, or burn them.
- 2) Dealers provide battery environmental treatment services.

Short circuit

- 1) Do not leave batteries and other metal objects together.
- 2) Do not open the battery, and store the battery in a dry and anti-frost room. Maximum temperature is 50°C. Please Keep dry all the time.
- 3) Do not charge waste battery .Change a new one immediately.

1.2 Eye Injury hazard

If you do not ware safety glasses with side shields, it may cause eye damage and even blindness. It requires wearing safety glasses with side shields.



1.3 Operation

Personnel who are not properly trained are not allowed to operate the strapping tool. Before straining straps rood ond correctly understand the operating instructions. If you do not follow the operating instructions or improperly load the straps, it will cause straps damaged. Before being familiar with the strapping tool, please keep your fingers far away from squeezing or cuttl9 areas.

1.4 Adhesion position





You should check the pressured adhesion position. Be familiar with adhesion control and regulation. Irregular adhesion may be insecure, which cause serious injury. Please do not ship the packing containers which are not correctly packaged.

1.5 Straps distribution

Please use the specially designed distributing device to distribute the straps. When not in use, please fold the strap end into the distributing device.

1.6 Straps warning

Do not use straps to drag or liftload, which easily lead to personal injury.

1.7 Straps broken hazard

Improper operation, excessive tensioning, using straps not as required, load sharp corner will cause tightening force loss, or straps broken could eventually:

The operator loses his balance and falls down.

Strapping tool and straps together quickly fly to the operator's face.



Attention

- 1) If the load angle is very sharp, please add edge protection.
- 2) Please wind the straps around the suitable load surface
- 3) When tensioning and adhesion, operating personnel and straps are on the same straight line, there may be hurt by flying straps or strapping tool, so when operating please stand beside straps and keep spectators far away. Please use recommended straps with good quality in the instruction, with suitable width, size, and strength. Straps that do not match may cause damage when tensioning.

1.8 Tensioning straps shearing

When shearing straps, please use a suitable shearing tool, and ensure a safe distance with people, and do not stand on the same straight line with straps, and keep away from the straps loose direction. Please use the special tool for shearing the straps. It is not allowed to use a hammer, pliers, hacksaw, axes and soon.

1.9 Fall Hazard

Keep your work area clean and tidy. Untidy work area is likely to cause damage hazard.

Before tensioning, bad stay or unbalance will be easy to fall, especially in the stair area. So keep





body balance. Both feet shall tread on a flat and solid surface. When you feel uncomfortable, do not operate the tool. Please pay attention to the precautions specifically mentioned in work area.

1.10 Strapping tool hazard

- 1) Well-maintained strapping tool is necessary.
- 2) Periodically inspect broken or worn parts, if there are cracking or worn parts, do not use the machine.
- 3) Do not modify the machine, or else it may cause personal injury.

2. TECHNICAL PARAMETERS

2.1 Description

Manufactured strapping tool is using plastic straps. Manually use strap feeding device to wind the plastic straps around the box (bag). Straps end is inserted into strapping tool and automatically tensioned, separate after friction adhesion.

2.2 Size of strapping tool with battery

Length:	350mm
Width:	135mm
Height :	170mm
Weight:	4.2kg
Battery weight :	0.52kg

2.3 Straps material

Quality: flat or embossed PET (polyester) and PP (polypropylene) straps.

Size: 13.00-25.00/0.4-1.20

Please choose the appropriate size according to strapping tool you purchased.

2.4 Straps strength

Tensile strength: 600-5500N. (Maximum value depends on the quality of straps.)

Tensioning speed: 60-100nm/s

Adhesive strength: about 75% or plastic straps. (Depending on the quality of straps)

2.5 Working temperature

- 1) Ambient air temperature is 5 to 45 degree centigrade.
- 2) Optimum working temperature is 15 to 20 degree centigrade.





3. ACCESSORY



Please use the parts and accessories that mentioned in the operating instructions. To use other accessories may hurt you and others

3.1 Battery powered strapping tool

As some strapping tools may use NiCd (nickelcadmium) or NiMH (nickel metal hydride) batteries, please purchase the battery for this tool according to the following parameters.
Type: Lithium battery Voltage: 14.5V Capacity: 4.0A

3.2 Battery charger

Standard charger

Voltage frequency is 100V-245VAC, 50-60HZ, DC 16.8V - 3.0A

Charging time:

Lithium battery 4.0 A/h, charging time is approximately 100 minutes.

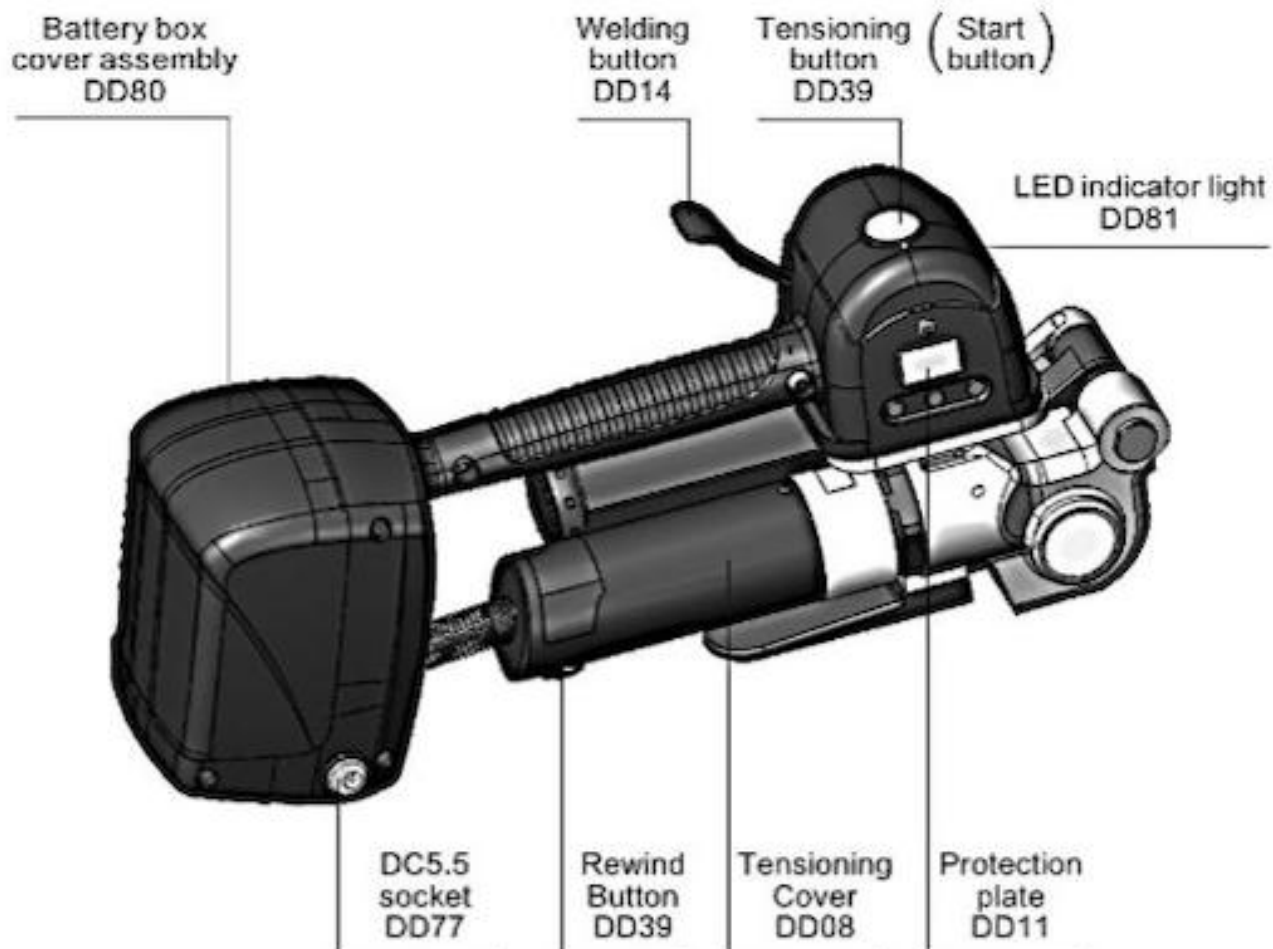
3.3 All types equipped with carton+ pearl wool packaging

3.4 Each strapping tool equipped with one set of common operating tools





4. OPERATING ELEMENTS



Diode Status Indication	
Blue	Normal working
Red flashing	Low battery, please charge
Red on	Machine failure, power off inspection
Purple on	Work finish

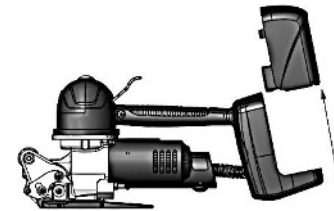




5. OPERATION

5.1 Installation

- 1) Please do not put the strapping tools in the rain!
- 2) For security, the battery is not charged when delivery.
- 3) Before using, please charge. Refer to the separate battery charger instruction manual.



Insert the battery:

- 1) Push the battery box cover assembly upward by arrow direction, and insert the battery into slot from up to down.
- 2) When inserting the battery, electric quantity state will show for a short time.
- 3) Battery charge status is displayed by the LED charging indicator.

Quantity	Indicator light	Quantity	Indicator
No-load	Red light	314	Blue
1/4	Red flashing	516	Blue
1/2	Blue	1/1	Blue

Remove empty battery:

If LED flashes in red when tensioning or welding, which indicates that the battery power runs out, all electrical functions will be stopped.

Adhesion Insufficient

Warning: If the adhesion is not sufficient, please remove the straps! The battery must be charged.

Note: Machine started, if there is no operation in half an hour, the machine will automatically enter the power-off state, press the start button (tensioning button) again to make the machine return to working state.

5.2 Adjustment of Welding time and tightening force

Decide different welding time and tightening force according to the size and quality of straps,
Figure: Left (F), Middle (▲), Right (▼) can adjust welding time and tightening force.

1. When press left (F), protection plate (DD11) screen show F1 (press again show F2), that is the tightening force instruction, press middle (▲)





more tighten, press right (▼) less tighten (show data range 1-6). There is a difference of 900N tension between each gear position.

2. When press left (F), protection plate (DD11) screen show F2 (press again show F1), that is the welding time instruction, press middle (▲) more, press right (▼) less (show data 1.0-5.0)

5.3 Straps Winding

Wind the straps as shown in the figure.



Warning! Keep away from oil, grease and other dirt when welding plastic straps. Dirty straps can't be welded.



5.4 Straps Inserting

Lift the handle with your right hand, insert straps, with left hand, and two straps parallel stacked, release the handle.



5.5 Strap Tensioning

Press the tensioning button, after reaching straps tensioning strength, then release the switch knob.

Tensioning operation can be interrupted or restarted at any time. In the tensioning process, LED displays in blue.

After reaching the desired tension, do not press the switch knob, there is the risk of straps broken.



NOTE:

Press tensioning button all the time until the LED displays in purple, tightening protection doesn't affect the step.



Keep strapping tools equilibrium shifting when tensioning.

So please do not obstruct moving direction of the strapping tool.

5.6 Contact Adhesion

Press welding button, the hands leave immediately, plastic strap is welded and the redundant straps are cut off.

During welding, LED displays in the blue or purple.

Welding is completed.





5.7 Remove strapping tool

Lift the handle and loose straps, pull the machine to right side and away from the straps.



5.8 Adhesion control

Normal adhesion control is necessary. You can see the quality of the adhesion with the eyes.

As shown in the following figure:

Correct Adhesion:

Weld the entire width of strap, the welding length is about 19mm. As small amount of molten plastic is allowed to overflow the edge.



Welding time is too short:

The entire width is not welded and the adhesion is insufficient.



Warning! Straps with insufficient welding must be removed. Adjust the welding time.



Welding time is too long:

Such as welding time is too long, straps are overheated, molten plastic overflow two sides. Adhesion effect is affected.



Warning! Straps with not enough adhesive strength must be removed. Adjust the welding time.



Tensioning, adhesion and cutting adjustment

If tensioning slip (due to using different thickness strap), remove the screws of fixed tensioned toothed plate on the base and move, replace the top plate of the toothed plate. Put the factory matched gasket under tensioned toothed plate and assemble in reverse order.



When using 0.5-1.2mm straps, do not adjust the upper and lower teathed plate welding gap, which will cause bad welding. Remove the screws of fixed welding toothed plate. Put the factory matched gasket under the welding toothed plate and assemble in reverse order.

If the cutter is not smooth, replace the cutter or replace the cutter compressed spring, refer to the cutter consumables and replace one.

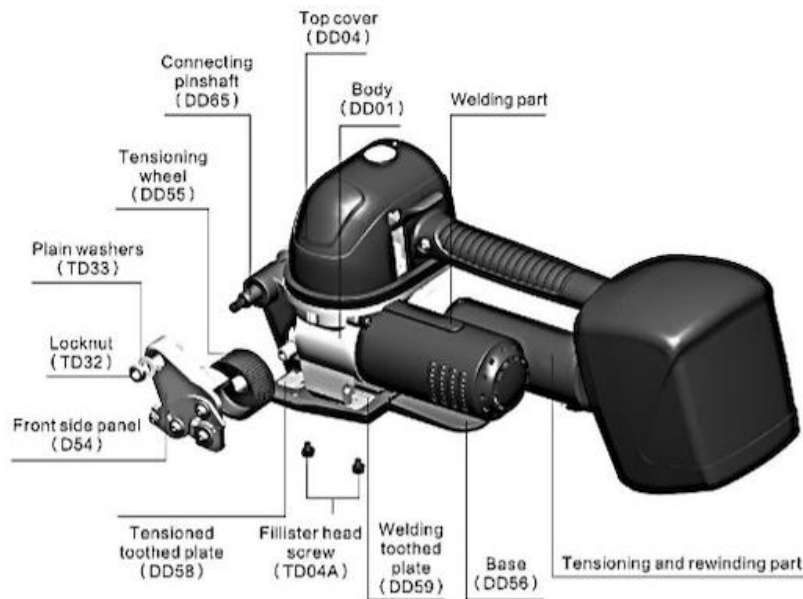
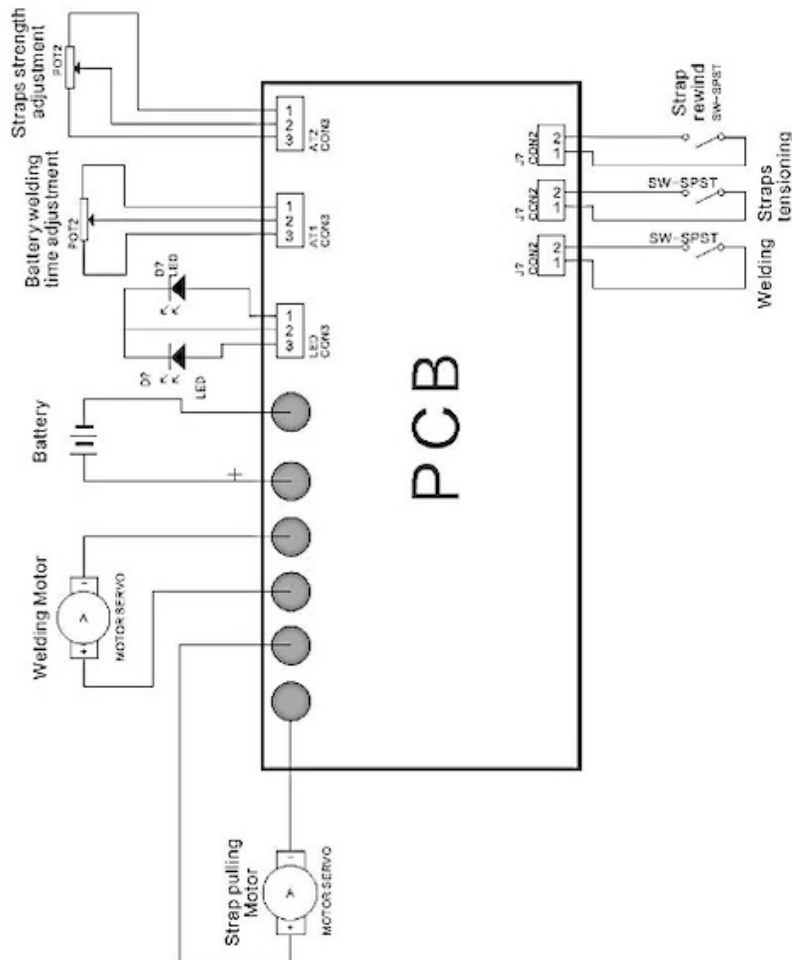


Figure 2



6. Electrical Connection



7. WORN PARTS REPLACEMENT



Every time maintenance, please remove the battery.

7.1 Cutter (DD-35):

Fig 1, First remove the screw M5*30 (TD02) that is fixed on the body (DD01), remove the cutter frame (DD33) and move, check, replace the cutter (DD35), cutter spring (DD36), cutter base (DD34), cutter pin (DD37), bearing (TD23), and assemble in reverse order.





7.2 Welding toothed plate (DD59):

Fig 2, First remove the screws (TD04A) of fixed welded toothed plate (DD56) on the base and move, check, replace the top plate of the toothed plate, and assemble in reverse order.

7.3 Tensioning toothed plate (DD58):

Fig 2, Remove the screw (TD04A) of fixed tensioned toothed plate in the base (DD56) and move, check, replace the top plate of the toothed plate, and assemble in reverse order.

7.4 Tensioning Wheel (DD55):

Fig 2, Remove the locknut (TD32) of connecting pin shaft (DD65), plain washer (TD33) and move, remove the front side panel (DD54) and move, remove, check, replace the tensioning wheel, and assemble in reverse order.

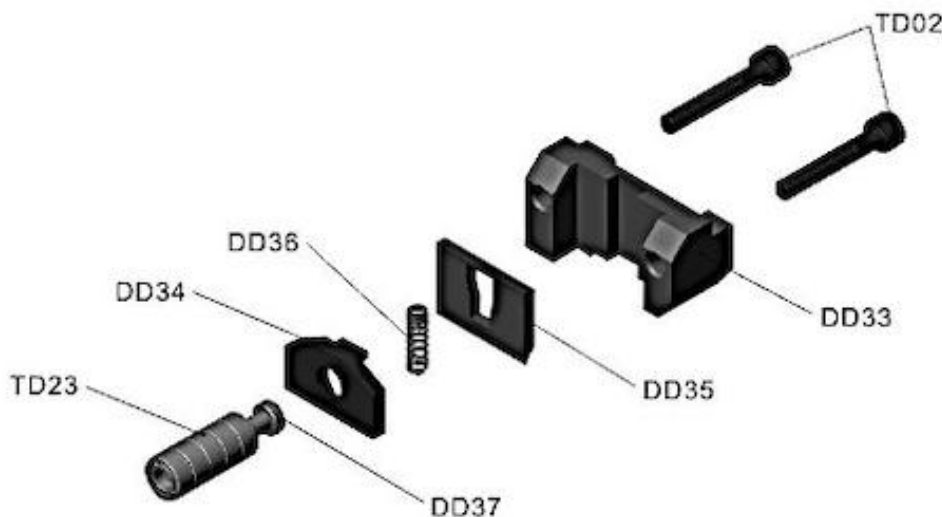


Figure 1

8. COMMON FAULTS

Special reason:

If the vibrating rod stuck in strapping process (LED in red), which results straps stuck in the machine and can't be removed. Immediately cut off power, cut the straps, remove the screws on the left and right panel covers and move, remove the straps, and check the machine.

Press the welding and tensioning button, if motor doesn't rotate, open top cover (DD040). Check whether the micro switch, tensioning button and Lines fall off.

Remove motor cover (DD15)/(DD08), check whether motor and lines fall off.

Please contact manufacturer or dealer service center.





9. QUALITY MAINTENANCE

- Worn parts, defect of improper installation, improper operation and maintenance.
- Defect of using or not use defective safety devices.
- Operate without the operating instructions.
- Change packaging tools random
- Improper control of worn parts.
- Improper maintenance of packaging tools.

10. SERVICE

Only the manufacturer and dealer service centers are allowed to provide service and repair work.

If the packaging tool can not be operated without load, please do not disassemble it, please keep original packaging send your local sales service center or manufacture.

Plastic strapping tool is a highly effecient packaging device, we advise you send to service center or manufacturer do maintenance withing 12 months.

11. CLEAN

Use compressed air to clean strapping tool dirt in welding part void space (do not allowed to cleaned with the mechanical tools). Do not use water or corrosive liquid to clean.





12. SPARE PARTS LIST

Table 1

Material Code	Part Dwg No.	Description	Ratio
2010014920	DD01	Main body	1
2010014922	DD02	Left shell	1
2010014923	DD03	Right shell	1
2010014924	DD04	Top cover	1
2010014925	DD05	Battery outer cover	1
2010014926	DD06	Battery inner cover	1
2010014927	DD07	Battery cover plate	1
2010014928	DD08	Tensioning protection cover	1
2010014929	DD09	Protect shell plate	1
2010014930	DD10	Button	3
2010014931	DD11	Protection plate	1
2010014932	DD12	Monitor plate	1
2010014829	DD13	Welding lock block	1
2010014835	DD14	Welding button	1
2010014933	DD15	Welding protection cover	1
2010014830	DD16-1	Vibration rod 19	1
2010014831	DD16-2	Vibration rod 25	1
2010089763	DD16A	Vibrate rod bush	1
2010014637	DD17	Piston	1
2010014638	DD18-1	Eccentric shaft	1
2010013145	DD19	Welding fixed locating pin	1
2010013143	DD19A	Stand roller shaft pin	1
1030115323	DD20	Plunger spring	1
2270088857	DD21	Fixed base	1
2010014832	DD22	Piston pin	1
1030117217	DD23	Welding stand spring	1
2010014833	DD24	Thimble	1
2010014834	DD25	Thimble sleeve	1
2010013129	DD26	Welding stand	1
2270088881	DD27	Piston bush	1
1030115324	DD28	Piston spring	1
2010013146	DD30	Welding fulcrum shaft	1





Continued

Material Code	Part Dwg No.	Description	Ratio
1030113725	DD31	Cell spile assembly	1
2010014639	DD32	Fixed pin of welding lock block	1
2010014759	DD33	Cutter shelf	1
2010014760	DD34	Cutter fixed base	1
2010014761	DD35	Cutter	1
2010014762	DD36	Spring	1
20500010002	DD37	Cutter pin	1
2010014934	DD38	Display panel	1
1020608830	DD39	Metal button GQ16B-10N	2
2010014921	DD40	Insert nut	1
1020101390	DD41	Welding motor	1
2270088455	DD42	Welding motor fixed base	1
2270088454	DD48	Tensioning motor fixed base	1
20500010001	DD49	Front side plate bush A	1
2140079861	DD50	Front side plate bush B	2
2010013096	DD51	Panel	1
2010013027	DD52-1	Limit block-13	1
2010013028	DD52-2	Limit block-16	1
2010013029	DD52-3	Limit block-19	1
1030113398	DD53	Front side plate spring	1
2010013006	DD54	Front side plate	1
2010013083	DD55	Tensioning wheel	1
2010013009	DD56	Base	1
1030113870	DD57	Tensioning spacer	4
2011000102	DD58	Tensioning toothed plate	1
2011000103	DD59	Welding toothed plate	1
1020101362	DD60	Tensioning motor 3670	1
1030113871	DD61	Welding spacer	3
2010013161	DD62	Bearing block	1
2010013033	DD63	Turbine	1
2010013007	DD64	Reducer casing	1
2010013158	DD65	Connection pin	1
2010013097	DD66	Back shroud	1
2010013034	DD67	Worm	1
2140080108	DD68	Internal tooth nest	1
2010016991	DD69-1	Inner wheel	1
2010013023	DD70	Planet carrier	1





Continued

Material Code	Part Dwg No.	Description	Ratio
2010013032	DD71	Planet pin	2
2010013037	DD72	Planet wheel	2
2010013100	DD73	Back washer	1
2010013099	DD74	Front washer	1
2010013144	DD75	Stand roller shaft	1
1020608871	DD77	Battery charging socket DC5.5*2.1MM	1
1020608871	DD77-1	Charger plug	1
1020608828	DD78	Omron microswitch	1
1030115433	DD79	Spacer	1
1021603189	DD80-1	Battery	2
1020608831	DD81	Indicator light	1
1030113397	DD83	Connecting shaft spring	1
1021000943	DD84	Circuit board	1
1030103651	DD85	PE plastic corrugated pipe AD10 closed (OD ϕ 10 ID ϕ 6.5)	0.1M
1030116839	DD86	Woven elastic tape (imported Rubber ribbon) width18MM*thickness1MM	0.08M
1030110837	DD87	U type clip model 3.3 (threaded hole M4)	1
1030115953		Charger (JY-L4S30)	1
1030115954		Innter box 420*275*180MM (one box with one lid)	1
1030113682		Outer box (white box size 440*280*180)	1
1030115434		Chinese manual	1
1030115435		English manual	1
1030115436	TD01	Black inner hexagonal cylindrical screw M4*45	4
1030111940	TD02	Black inner hexagonal cylindrical screw M5*30	2
1030115437	TD03	Black inner hexagonal cylindrical screw M3*8	7
1030115438	TD04	Black inner hexagonal cylindrical screw M4*6	5
1030113539	TD04A	Black inner hexagonal cylindrical screw M4*4	2
1030113710	TD05	Black inner hexagonal cylindrical screw M5*14	5
1030112364	TD06	Black hexagonal socket head set screw M4*3	2
1030113851	TD07	Black set screw M5*8 10.9-Grade	1
1030114857	TD08	Black set screw M4*4 10.9-Grade	5
1030115439	TD09	Black set screw M5*5 10.9-Grade	1
1030113545	TD10	Black round head hex socket screws M4*8	5
1030113849	TD11	Black inner hexagon cup head screws M4*6	2
1030115440	TD12	Black cross countersunk head screw M3*10	9
1030115441	TD13	BT cross disc tapping screw M3*14 (color steel tile)	4
1030113537	TD14	Galvanized self-tapping screw M3*10	4
1030119956	TD14A	Galvanized self-tapping screw M4*10	1





Continued

Material Code	Part Dwg No.	Description	Ratio
1030115443	TD15A	Galvanized self-tapping screw M1.7*12	3
1030113853	TD16	Black cross round head screw M2.5*10	3
1021400481	TD17	Bearing NSK6000-ZZ	2
1021400711	TD18	Bearing NSK607	2
1021401848	TD19	Bearing NSK635-ZZ	1
1021401835	TD20	Bearing NSK6300-ZZ	1
1021400493	TD21	Bearing NSK6001	3
1021401828	TD22	Needle bearing TLAM0810	1
1021401827	TD23	Bearing NSK685	5
1021401829	TD24	Needle bearing TLA0408	2
1021401830	TD25	Needle bearing KT477N	2
1021401559	TD26	Oil Bearing 10*12*12	1
1021401557	TD27	Oil bearing 9*12*10	1
1030102684	TD28	Clamp spring for hole ϕ 19	1
1030106527	TD29	Clamp spring for hole ϕ 48	1
1030102658	TD30	Split washer ϕ 4	2
1030100187	TD31	Clamp spring for bearing ϕ 10	1
1030113533	TD31A	Stop nut M6	1
1030100196	TD32	Nickeling stop nut M6	1
1030100081	TD33	White zinc flat gasket ϕ 6	1
1030110838	TD34	Black set screw M3*5	2
1030102863	TD35	BT cross disc tapping screw M4*10	1
1030110836	TD36	Cross Recess Head Screw M3*10	6
1030116582	T1089	Black cross sunk head screw M3*6	1
1030119480	DD92	Electric YA series nameplate sticker	1
1030119489	DD92-A	Electric YA series nameplate sticker (English)	1
1030119588	DD93	Tag used for YA lithium battery	1
25A series (Note: The difference between 19A and 25A, in addition to the following 8 kinds of products are not the same)			
2010014831	DD16-2	Vibration rod 25	1
2010013107	DD2501	Front side panel	1
2010013124	DD2502	Base	1
2010013495	DD2503	Welding wheel	1
2010013494	DD2504	Strapping wheel	1
2010013493	DD2505	Tightening pulley	1
1030113873	DD2506	Strapping washer	3
1030113874	DD2507A	Welding washer	3



