CE

YS-B1 Semi-Automatic Strapping Machine Use, Maintenance and Spare Parts Handbook





The machine can only be operated by relevant personnel.

Daily safety instructions:

Please refer to the following information if you need to operate or maintain the machine.

Before operation

- \rightarrow Read the manual and get prepared.
- → Check all the parts of the machine. If any broken, replace it with a new one (an original part is recommended).
- \rightarrow Make sure that no tools or other items are on the machine and keep it clean.
- \rightarrow Read operation and maintenance instructions carefully.
- → Read the explanatory phases and important identification about machine application carefully.

During operation

- \rightarrow Do not wear loose-fitting clothes in case that they are entangled into the machine.
- \rightarrow Do not carry out maintenance operation barefoot.
- \rightarrow Do not put hands or other objects inside the working area.
- → Do not put any heavy objects irrelevant to the strapping on the machine, as the machine has limited loading bearing.
- \rightarrow Do not use the machine to strap the products beyond the scope of application.
- \rightarrow Do not use the machine to strap the products beyond the scope of application.

After operation

 \rightarrow Make sure all of the switches are turned off.



The machine can only be operated by relevant personnel.

Service and safety regulations

- \rightarrow Please keep the service contents.
- \rightarrow Do not conduct settings or adding lubricants while the machine is in operation.
- \rightarrow Please cut off the power supply before opening the cover board.
- → Do not install any additional parts unauthorized by our company for the sake of the normal operation of the machine.
- \rightarrow Please use the original parts.
- \rightarrow Please use a power supply system meeting the requirements of the machine.
- → Do not tear off or cover type specifications or safety warning and instruction signs on the machine.
- \rightarrow Operate the machine according to the manual if necessary.



The machine can only be operated by relevant personnel.

Attention!

For the normal running of the machine, please keep both the machine and its parts clean, lubricate any of the parts that need lubricating, and make inspection and repair for electrical equipment. The machine can only be operated by relevant technical personnel.

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PART 1 MACHINE PROPERTY AND SAFETY INFORMATION

1-1 Performance parameters

Itom	Parameters	
nem	YS-B1	
Power supply	AC220V, 50Hz, 0.2kW	
Working speed	3 seconds/loop	
Strapping force	0-50kg	
	Polypropylene	
Strop size	Width 5 \sim 15mm±1mm, thickness 0.5 \sim 0.8mm±0.1mm	
Strap size	Strip coil width; 160mm-190mm	
	Inner diameter: 200mm-210mm; outer diameter: 400mm-500mm	
Outside dimensions	L750mm×W550mm×H450mm	
Worktable height	450mm	
Machine weight	65kg	
Working noise	≤75dB(A)	
Environmental conditions	Relative humidity≤90%, temperature 0°C-40°C	
Bottom adhesive position	Hot melting: adhesion surface≥90%, adhesion width ≥20%; adhesion positional deviation≤2mm	

1-2 Nameplate

Please inform your supplier of Product Order No. and model if you make feedback. See the nameplate for the detailed introduction of the machine (Fig. 1-1).

Strappin	g Machine CE
Model: YS-B2	Power: AC220V 50/60Hz 0.25kW
Strapping speed: 3 s/loop)	Weight: 65kg
Serial No.:	Delivery date:
Anti-explosion mark: Anti-explosion Certif	icate No.:

FIG 1-1

1-3 Overview and area of application

This machine adopts a new-model MCU circuit: the whole action of strapping controlled by the MCU; the design of super undertone: precise and sophisticated in the assembly of the whole machine, low noise, reducing the working pressure; and the design of the new-generation of heater steel sheet: ensuring no defects of deforming and short circuit. When one duty cycle operation finishes, the machine will stop automatically, saving power.

1-4 Safety cautions on using the machine

① Please identify the power supply used, and do not plug into a wrong power supply. This machine adopts the single-phase three-wire system and the colored line is the grounding line for electric leakage protection

2 Do not touch the heater sheet by hands directly.

③ Do not flush the machine with water. If it is humid in the workplace, the operator should not operate it barefoot.

④ Do not change, add or reduce the parts of the machine randomly.

- 5 The strap roller surface shall be free of oil.
- 6 Please turn off the power switch and pull out the plug when the machine is not used.
- ⑦ Main parts listed in the manual shall be lubricated regularly (see Item 3-4-1).

(8) If the machine is used in the anti-explosion industry, it shall be equipped with electrical equipment such as an explosion-proof motor.

⁽⁹⁾ It is not allowed to replace or damage the structure and configuration of explosion-proof components randomly. For maintenance involving flame-proof joints, contact the manufacturer of the original product.

(1) The use of the machine should comply with the manual of the machine, the instructions of explosion-proof components, as well as relevant regulations of national standards GB 3836.13-1997, GB 3836.16-2006 and GB 50257-1996.

1-5 Machine radiation safety

Noise: ≤75dB(A)

1-6 Safety signs

1-6-1 Safety sign labeling position

Various prohibiting, warming, directive and prompting marks are used on the equipment, which remind people of paying attention to potential dangers or provide instructions, palying the role of avoiding possible dangers, as shown in FIG 1-2.



FIG 1-2

1-6-2 Description of safety signs

No.	Symbol	Meaning	Remarks (labeling position)	
1	Image: Constraint of the set of the	WARNING Dangerous Zone	In the position where it is prone to cause personal injuries	
2	March Warning Hazarbous voltage Hazarbous voltage Leichic components inside Operated by professional people only	WARNING Electric Shock	On the electric equipment and lines where electric shock may occur	
3	Image: Constraint of the state of the s	CAUTION Hot Surface	On the heating parts or other heater parts where generating high temperature	
4	CAUTION ELECTRIC SHOCK Keep ground wire connected	Directive Grounded Reliably	In the places requiring lightning protection and electrostatic prevention	

Description of Safety Signs

PART 2 MACHINE SPECIFICATIONS AND COMMISSIONING

2-1 Specifications

- 2-1-1 N.W.: 65kg
- 2-1-2 G.W: 74kg
- **2-1-3** Volume: 0.30m³
- 2-1-4 Manufacturing date: See the Certificate of Quality

2-2 Transportation and storage conditions

2-2-1 Machine structure illustration (FIG 2-1)



FIG 2-1

2-2-2 Handling

It shall be handled by a forklift, during which attention should be paid to safety. And it must be placed in a space large enough. (See FIG 2-2).



FIG 2-2

2-2-3 Storage conditions

For long-distance transportation or long-term storage of the machine, the machine must be packaged with a wooden or hard paper box, and fixed on a solid base plate. Moisture absorbing agent shall be placed in the packaging box, and anti-rusting agent shall be sprayed inside the machine. It is strictly prohibited to place any heavy object on the box. And the machine cannot be inverted during transportation and storage.

The store room must be dry. Do not expose the machine to extreme cold or heat environment. Place the machine on an even floor in order to avoid any distortion.

After long-distance transportation or long-term storage of the machine, it is recommended that check all the movable parts manually before the machine is connected to the power supply, so as to avoid the over-loading of electrical equipment.

2-3 Commissioning

Check before operation

- 1) Check whether the fasteners are loosened;
- 2 Check whether the motor and electric equipment are dry and with good insulation;
- ③ Check whether the external power satisfies the power requirements of the machine.

PART 3 MACHINE OPERATION

3-1 Functions of control panel (FIG 3-1 and FIG 3-2)



FIG 3-1



FIG 3-2

- 1 Power switch (POWER)
- ② **Strap length adjustment (TIMER):** Each scale is about 500mm. Turn it clockwise, the length of strap fed will be longer; otherwise, it will be shorter.
- ③ **Strap tension adjustment (TENSION):** Choose the tension degree of strap according to the size of package.
- ④ Manual feeding (FEED)/Reset button (HOME): Push FEED button to help feed strap. The longer you press at it, the longer strap will be fed. If the machine is not at the home position, press the button HOME to make the machine back to the home position.
- (5) **Cooling time adjustment** (COOL TIMER): Adjust the cooling time for better adhesion effects according to the different strapping belt and the different strapping tension.

3-2 Method for feeding strap





- ① Pull the strap out from the strap reel and check whether the strap head is down (if not, then you need to change the side of strap reel), thread the strap from the bottom of roller A upward to top of roller B.
- ② Then thread the strap through the top of roller C to the bottom of roller D. Then upward, thread it through the strap slot E. Then along the guide rail, thread it among the rollers F.
- ③ Press FEED button, then the strap will be fed automatically, thus finishing the strap threading.

3-3 Operation steps

- ① Thread strap well according to the method as shown in FIG 3-3.
- ② Switch on the power switch 1 indicated in FIG 3-1 or FIG 3-2.
- ③ Put the object to be strapped onto the machine, close to the barrier.
- ④ Make the strap wrap around the object and insert it along the strap slot, then the machine will strap automatically.

WARMING!



The strap will be pulled away immediately once it is fed into the slot. At this point, you must remove your hands from the strap immediately. If you don't remove your hands or fingers out from the middle between the strap and the object, they are likely to be clamped between them, resulting in injuries. Therefore, Be careful while operating.

3-4 Daily maintenance

Frequent maintenance and care for the strapping machine not only prolongs the service life of the machine but also helps to avoid trouble, thus improving the production efficiency.

3-4-1 Lubrication

① Slide table (as shown in FIG 3-4), left bar, middle bar and right bar (as shown in FIG 3-5) should be lubricated with oil monthly.

② The place with shafts and holes and bearings should be lubricated with oil once every 3 months.

- ③ Grease in the gearbox of the decelerator should be supplemented once every year.
- ④ Please note that the following parts cannot be lubricated:
 - a. Strap feeding and reversing rollers
 - b. Micro switches



FIG 3-4



FIG 3-5

3-5 Positions required to be adjusted

① Temperature adjustment (TEMP.ADJ): Open the cover plate of the control cabinet at the side of the control panel of the machine, and you will see a potentiometer obviously. Turn it in the clockwise direction and the temperature will increase. If the temperature is higher or lower than what it should be, the adhesion effect will not be as good as it should be. Therefore do not adjust too much for once. Unless the difference in voltage is too great, adjust it to be between 4 and 5, that's ok (show as FIG3-6).

Attention: The heater plate is a consumable. In order to extend its service life, turn the power switch off if the temperature is set too high, or if the machine is not in use.



FIG 3-6

- ② Cooling time adjustment (COOL TIMER): In general, it is enough to adjust the temperature of the heater, but because of different strap types, materials, changes in surrounding environment like climate and cold rooms, and other factors such as strapping packages of hard object or those with strong rebound, sometimes if you just adjust the temperature, it may not reach the perfect melting point. In such an instance, the time adjuster can adjust (extend) the time for the bonding (cooling) of the two strap ends. The longer the cooling time is, the better the adhesive strength is. Turn it clockwise, the cooling time is longer, and it was adjusted to be 0 second before delivery, (as shown in FIG 3-6).
- ③ Tension adjustment: There is a potentiometer button marked "TENSION" on the switch. Turn it clockwise, the tension increases. If the strap still cannot be tightened after you turn it for a very large scale, you have to tension the tension spring.

Attention: Do not adjust too much at once.

④ Width adjustment: With a special design, this machine is applicable for straps of 5mm-15mm, and you only need to adjust the width of the strap inlet, the spacing block of strap outlet (as shown in FIG 3-7) and the spacing block of the strap conveying base plate, as shown in FIG 3-8), all other parts can be used without any change. The machine has been set for 12mm straps as standard at the factory.



FIG 3-8

(5) Length adjustment of strap fed: There is a potentiometer knob, marked "TIMER" on the switch box; turn it in a clockwise direction, then the length of the strap becomes longer.

PART 4 MAINTENANCE AND TROUBLESHOOTING

4-1 Safety warning on maintenance

- ① Make sure that you have turned off the main power supply;
- ② Maintenance staff should not carry out maintenance barefoot.

4-2 Regular maintenance and cleaning

Parts that need cleaning: slide table, left bar, right bar and middle bar.

- ① Slide table: (As shown in FIG 3-4) the slide table must fit with the left and right guide rails precisely, and can also move forward smoothly. Therefore this position especially needs to be cleaned and maintained. The cleaning procedure is summarized as follows:
 - a. Remove the tension spring below the slide table.
 - b. Move the slide table backward and take it out.
 - c. Clean the grooves of the slide table and left and right guide rails.
 - d. Install the slide table between the left and right guide rails and pull the spring.
 - e. Move the slide table forward and backward to check whether it moves smoothly. If it is necessary to adjust, the right guide rail cannot be adjusted, and just adjusting the left guide rail will be ok.
 - f. Apply a little cart oil or lighter lubricant to the gap between the slide table and left and right guide rails.
 - g. If the slide table can move freely, but it cannot return back to its position, check whether the tension spring has worn out. If so, change it or cut it so that it is shorter.
- ⁽²⁾ Left, middle and right bars: All of them must move up and down smoothly at the chamber base, or the machine cannot strap normally. Therefore cleaning and maintenance are very important. The method is as following: (as shown in FIG 3-5).
 - a. Remove the tension spring on the middle and right bars.
 - b. Move the upper slide table backward slightly and take out the middle bar first and then the right bar.
 - c. Clean the middle and right bars and the machine chamber base.
 - d. Install the right bar first, and then the middle bar and the spring.
 - e. Apply some lighter lubricant oil around all of the bars.
 - f. If the machine is running for a long time, and the middle and right bars cannot cut off the strap, then adjust the middle bar closer to the right bar a little. You must make sure that the middle bar can move up and down smoothly; or change the cutter of the middle bar.

4-3 Frequent faults and troubleshooting

- ① Strap cannot be fed automatically: In this situation, check whether the button of "strap length adjustment" is at "O" position first, and then check whether the strap is threaded correctly. In addition, foreign matters blocked near the strap rollers, carbon brush at the rear of Motor M2 worn, and motor's failure to run or weakness in running can also result in this.
- 2 Adhesive effect is not so good:
 - a. The temperature is too high or too low, and the viscosity of a special strap is not as good. So the temperature must be correct.
 - b. Pressure is not enough because the compressed spring in the cavity is shortened or it is broken, so replace it.
 - c. If the 635 bearing below the middle bar is damaged, then it only affects the warming but the strap can't be bonded completely, so replace the 635 bearing.
 - d. If the long spring of the pendulum bar is worn out, it cannot pull the pendulum bar to the correct position, thus leading to part adhesion.
 - e. If the electric heating steel sheet is not in the correct position so that it touches the PP strap on the top and bottom or left and right bars, and so that it cannot heat up, adjust it according to the actual circumstance or application of use.
- ③ No action while inserting strap:
 - a. There is something wrong with the inching switch LS1 that is below the slide plate or shrapnel is stopped by something, and so it can't touch LS1.
 - b. The machine is not at the home position, so insert strap but there is no action; it is necessary to push the reset button.
 - c. M1 motor's carbon brush is worn; Motor does not turn or is weak in running.
- ④ Acting continuously:
 - a. LS1 failure.
 - b. There is nothing wrong with LS1, but a small object is caught between contact point and spring slice or the spring slice itself is caught so that it cannot be released after inserting the strap as usual.
 - c. There is something wrong with home position inching switch (LS2), so that no response is made to the strap inserting. Press the inching switch, M1 motor directly stops at the cooling position (the middle bar is held out against at the highest point) after running four laps; press the inching switch, this action is repeated. For this behavior, it can be determined that there is something wrong with LS2.
 - d. There is something wrong with strap reversing inching switch (LS3), the strap cannot be reverted after the strap is inserted, M1 motor directly gets back to its home position and stops after it runs for a lap. Press the inching switch, strap can be fed, and this action is repeated after the strap is inserted. For this behavior, it can be determined that there is something wrong with LS3.

4-4 Standard accessories supplied with the machine

•	Tension spring	YS-2A-70	2
•	Socket head wrench		1set
•	Cross screwdriver		1
•	8-10 wrench		2
•	Manual		1
•	Certificate of Quality		1

PART 5 MAIN PARTS AND DETAILED PARTS LISTS

5-1 Strapping head



5-1-1 Main motor assembly



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARKS
1	M1 motor	Z5D60-24GN-13S	1	
2	Bearing	6900	1	
3	Gear shaft	YS-2A-27	1	
4	Big gear	YS-2A-28	1	
5	Washer	YS-2A-65	1	
6	Gear box cover	YS-2A-36	1	
7	Spacer bush	YS-2A-84	2	φ28×φ22.8×11
8	Cam	YS-2A-35	1	
9	Cam	YS-2A-33A	1	
10	Cam	YS-2A-31	1	
11	Spacer bush	YS-2A-84	4	φ28×φ22.8×5
12	Cam	YS-2A-32	1	
13	Cam	YS-2A-34A	1	
14	Main shaft	YS-2A-25B	1	
15	Flat key	6×6×10	1	
16	Flat key	6×6×70	1	
17	Flat key	6×6×28	1	
18	Motor collar	YS-2A-114	1	
51	Inner hexagon screw	M6×20	4	
52	Spring washer	φ6	4	
53	Flat washer	φ6	4	
54	Inner hexagon screw	M6×20	1	
55	Spring washer	φ6	1	
56	Inner hexagon screw	M6×20	4	
57	Spring washer	φ6	4	
58	Flat washer	φ6	4	

5-1-2 Strapping head frame



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARKS
1	Spacer block	YS-2A-51	1	
2	Cassette mechanism frame	YS-2A-01	1	
3	Limiting block	YS-2A-30	1	
4	Bearing	6900	1	
5	Bearing	6004	2	
6	Spacer bush	YS-2A-84	1	φ28×φ22.8×5
7	Tension cam	YS-2A-117	1	
8	Situ cam	YS-2A-115	1	
9	Strap reversing cam	YS-2A-116	1	
10	Washer	YS-2A-65	1	
11	Switch pad	YS-2A-121	1	
12	Inching switch	KW-7(with roller)	2	
13	Fan frame	YS-2A-107A	1	
14	Fan	XD8025	1	DC24V
51	Inner hexagon screw	M4×12	1	
52	Spring washer	φ4	1	
53	Flat washer	φ4	1	
54	Cup head inner hexagon screw	M5×12	2	
55	Cup head inner hexagon screw	M6×20	2	
56	Cross big flat head screw	M4×8	1	
57	Spring washer	φ6	1	
58	Inner hexagon screw	M6×20	1	
59	Inner hexagon screw	M3×45	2	
60	Set screw	M6×10	1	
61	Inner hexagon screw	M4×16	2	
62	Hexagon nut	M4	2	
63	Cup head inner hexagon screw	M6×10 (Grade 12.9)	4	
64	Inner hexagon screw	M4×30	2	
65	Hexagon nut	M4	2	
66	Inner hexagon screw	M4×12	1	
67	Spring washer	φ4	1	
68	Flat washer	φ4	1	

5-1-3 Bar guide assembly



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARKS
1	Tension spring	YS-2A-69	3	
2	Pull rod	YS-2A-43	1	
41	Left bar assembly	YS-2A-150	1	See the diagram.
42	Middle bar assembly	YS-2A-151	1	See the diagram.
43	Right bar assembly	YS-2A-152	1	See the diagram.

5-1-3-1 Left bar assembly



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARKS
1	Compressed spring	01-104	1	
2	Small shaft	YS-2A-44	1	
3	Left cavity	YS-2A-18	1	
4	Small bolt	YS-2A-53	1	
5	Left claw	YS-2A-19	1	
6	Pressing plate	YS-2A-50	1	
7	Bearing	635 (thickened)	1	
8	Washer piece	YS-2A-68	2	
51	Inner hexagon screw	M4×12 (Grade 12.9)	2	

5-1-3-2 Middle bar assembly



DESCRIPTION		ΟΤΥ	DEMADKS
DESCRIPTION	PART NU.	QIT	REIVIARNO
Bearing	635 (thickened)	1	
Washer	YS-2A-68	2	
Pressing plate	YS-2A-50	1	
Middle cutter	YS-2A-17	1	
Small Bolt	YS-2A-53	1	
Middle cavity	YS-2A-16	1	
Small shaft	YS-2A-44	1	
Compressed spring	YS-2A-110	1	
Inner hexagon screw	M4×12 (Grade 12.9)	2	
	DESCRIPTION Bearing Washer Pressing plate Middle cutter Small Bolt Middle cavity Small shaft Compressed spring Inner hexagon screw	DESCRIPTIONPART NO.Bearing635 (thickened)WasherYS-2A-68Pressing plateYS-2A-50Middle cutterYS-2A-17Small BoltYS-2A-53Middle cavityYS-2A-16Small shaftYS-2A-44Compressed springYS-2A-110Inner hexagon screwM4×12 (Grade 12.9)	DESCRIPTIONPART NO.QTYBearing635 (thickened)1WasherYS-2A-682Pressing plateYS-2A-501Middle cutterYS-2A-171Small BoltYS-2A-531Middle cavityYS-2A-161Small shaftYS-2A-441Compressed springYS-2A-1101Inner hexagon screwM4×12 (Grade 12.9)2

5-1-3-3 Right bar assembly



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARKS
1	Bearing	635 (thickened)	1	
2	Washer piece	YS-2A-68	2	
3	Pressing plate	YS-2A-50	1	
4	Right claw	YS-2A-15	1	
5	Small bolt	YS-2A-53	1	
6	Right cavity	YS-2A-14	1	
7	Small shaft	YS-2A-44	1	
8	Compressed spring	01-104	1	
51	Cup head inner hexagon screw	M4×12 (Grade 12.9)	2	

5-1-4 Slide table frame assembly



REF.			οτν	DEMADKS
NO.	DESCRIPTION	PART NO.	QII	REMARKS
1	Slide table frame	YS-2A-08	1	
2	Frame shaft	YS-2A-21	1	
3	Spacer ring	YS-2A-52	1	
4	Extension spring	YS-2A-69	1	
5	Bearing	635 (thickened)	1	
6	Elastic spring	φ5×14	1	
7	Micro switch	RV-16-1C25(T)	1	
8	Special bolt	YS-2A-66	1	
9	Switch bump block	YS-2A-29	1	
10	Frame tongue	YS-2A-20	1	
51	Inner hexagon screw	M4×16	1	
52	Hexagon nut	M4	1	
53	Fastening screw	M6×10	1	
54	Cross big flat head screw	M3×16	2	
55	Inner hexagon screw	M4×8 (Grade 12.9)	2	

5-1-5 Slide table assembly



REF.	DESCRIPTION	DART NO	QTY	REMARKS
NO.	DESCRIPTION	FART NO.		
1	Slide table	YS-2A-09	1	
2	Right guide rail	YS-2A-11	1	
3	Left guide rail	YS-2A-12	1	
4	Extension spring	YS-2A-70	2	
5	Slide table bump block	YS-2A-10	1	
6	Damping washer	YS-2A-12A	2	
51	Inner hexagon screw	M3×10 (Grade 12.9)	2	
52	Spring washer	ФЗ	2	
53	Flat spring	Φ3	2	
54	Inner hexagon screw	M4×16	2	
55	Hexagon screw	M4	2	
56	Inner hexagon screw	M5×16 (Grade 12.9)	4	

5-1-6 Heater arm assembly



REF.	DESCRIPTION	PART NO.	ΟΤΥ	REMARKS
NO.			S	
1	Heater crank	YS-2A-07	1	
2	Bearing	635 (Thickened)	1	
3	Tension spring	YS-2A-71	1	
4	Heater plate bracket	YS-2A-61A	1	
5	Heating head bottom board	YS-2A-62A	1	
6	Insulation film	YS-2A-108A	1	
7	Electric heating installation board	J50-57	1	
8	Heater	J50-55	1	
9	Elastic pin	φ5×14	1	
10	Tension spring	YS-2A-69	1	
11	Guard board	YS-2A-103	1	
51	Inner hexagon screw	M4×16	1	
52	Hexagon nut	M4	2	
53	Inner hexagon screw	M4×20	1	
54	Inner hexagon screw	M4×8	2	
55	Inner hexagon screw	M4×12	2	
56	Spring washer	Φ4	2	
57	Flat spring	Φ4	2	
58	Cross big flat head screw	M4×10	2	

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5-1-7 Feeding and reversing motor assembly



REF.	DESCRIPTION	PART NO.	QTY	REMARKS
NU.	Otropy in a antional additional trades		4	
1	Strap inserting slot limit plate	YS-2A-41	1	
2	Strap inserting slot bottom plate	YS-2A-40	1	
3	Strap guide pressing plate	YS-2A-23A	1	
4		YS-2A-24A	1	
5	Strap guide base plate	YS-2A-22A	1	
6	Strap guide plate	YS-2A-64	1	
/	Strap guide plate	YS-2A-57	1	
8		φ5X10	2	
9	Bearing	608	1	
10	Jump ring	R-22	1	
11	Spacer bush	YS-2A-59	1	
12	Roller	YS-2A-06A	1	
13	Driving roller	YS-2A-05B	1	
14	Washer	YS-2A-65	1	
15	Driven roller	YS-2A-04A	1	
16	Cover plate	YS-2A-48A	1	
17	Guide strap board	YS-2A-46A	1	
18	Guide strap board	YS-2A-47A	1	
19	Jump ring	R-22	1	
20	Bearing	6900	2	
21	Seal plate	YS-2A-49B	1	
22	Roller wallboard	YS-2A-03A	1	
23	Eccentric shaft	YS-2A-39A	1	
24	Bearing	16002	2	
25	Jump ring	S-15	1	
26	Inclined gear shaft	YS-2A-26	1	
27	Flat key	5×5×30	1	
28	Bearing	16002	2	
29	Motor fixing plate	YS-2A-37	1	
30	M2 motor	Z5D90-24GN-30S-4	1	
31	Tension spring hanging plate	YS-2A-58A	1	
32	Tension spring	YS-2A-111	1	
33	Small column	YS-2A-55A	1	
34	Eccentric shaft	YS-2A-38A	1	
35	Bearing	6900	2	
36	Jump ring	S-10	1	
51	Cross big flat head screw	M4×8	4	
52	Cross big flat head screw	M4×10	2	
53	Spring washer	φ4	2	
54	Inner hexagon screw	M4×40	2	

55	Spring washer	φ6	1	
56	Inner hexagon screw	M6×16	1	
57	Cup head inner hexagon screw	M5×12	2	
58	Spring washer	φ5	2	
59	Flat washer	φ5×12	2	
60	Cross big flat head screw	M4×8	4	
61	Inner hexagon screw	M5×16	6	
62	Flat washer	φ6	1	
63	Spring washer	φ6	1	
64	Hexagon nut	M6	1	
65	Inner hexagon screw	M6×20	2	
66	Inner hexagon screw	M6×16	2	
67	Flat washer	φ6	4	
68	Spring washer	φ6	4	
69	Inner hexagon screw	M6×20	4	
70	Outer hexagon screw	M5×35	1	
71	Hexagon nut	M5	2	
72	Cup head inner hexagon screw	M5×12	1	
73	Set screw	M5×6	1	

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5-1-8 Tension adjusting assembly



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARK
1	Compressed spring	YS-04-161A	1	1
2	Arm end joint bearing	φ6	2	
3	Washer cover	YS-2A-118	1	
4	Tension rod	YS-2A-119	1	
5	spring pin	φ5×12	1	
6	Bearing	635 (thickened)	1	
7	Bundle tight rod bearing	YS-2A-120	1	
8	Swing plate	YS-2A-56B	1	
9	Tension spring	YS-04-212	1	
51	Retaining nut	M6	1	
52	Flat washer	φ6	2	
53	Hexagon nut	M6	2	
54	Spring washer	φ6	2	
55	Flat washer	φ6	2	
56	Out hexagon screw	M6×75	1	
57	Hexagon nut	M5	2	
58	Inner hexagon screw	M5×35	1	
59	Inner hexagon screw	M5×16	1	
60	Cup head inner hexagon screw	M5×12	2	
61	Spring washer	φ5	2	
62	Flat washer	φ5×16	2	

5-2 Strap reel control unit



REF.	DESCRIPTION	PART NO.	QTY	REMARKS
1	Hand wheel	00-192	1	
2	Outer flange	00-189A	1	
3	Support claw	00-143	4	
4	Inner flange	00-142	1	
5	Flange fixing plate	YS-2B1-100	1	
6	Shaft spring	S-25	1	
7	Flange shaft	YS-2B1-101	1	
8	Pin roll	φ8×40	1	
51	Outer hexagon screw	M6×16	8	
52	Flat washer	φ6	8	
53	Spring washer	φ6	8	
54	Nut	M6	8	

5-3 Strap reel control frame unit



REF.	DESCRIPTION	PART NO.	QTY	REMARKS
NO.				
1	Frame	YS-2B1-95		
2	Nylon bracket (right)	AS1-711		
3	Nylon bracket (left)	AS1-710	1	
4	Small shaft	YS-2B1-103	1	
5	Strap guide roller 90L	ASI-614	1	
6	Post	01-96	1	
7	Large strap guide roller shaft	YS-2A-76	2	
8	Strap guide frame	YS-2B1-102	1	
9	Large strap guide roller	YS-2A-74	1	
10	Screw	YS-2B1-98	1	
11	Brake frame	YS-2B1-97	1	
12	Washer bush	YS-2B1-99	2	
13	Brake pad	YS-2A-101	1	
14	Small strap guide roller frame	YS-2A-96	1	
15	Small strap guide roller	YS-2A-75	1	
16	Tension spring	YS-2A-113	1	
17	Stud	YS-2B1-94	2	
51	Nut	M12	4	
52	Inner hexagon screw	M4×40	1	
53	Nut	M4	2	
54	Nut	M6	1	

5-4 Body frame unit



REF. NO.	DESCRIPTION	PART NO.	QTY	REMARKS
1	Body frame	YS-2B1-87	1	
2	Panel	YS-2A-92	1	
3	Lever	00-210	2	
4	Right back leg	YS-2B1-88	1	
5	Right front leg	YS-2B1-89	1	
6	Caster	Universal-directional	4	2 with brake, 2 without brake
		screws, 3 cun, black		
7	Left leg	YS-2B1-90	1	
8	Switch box	YS-2A-94	1	
9	Inching button	LA160-16A	1	
10	Potentiometer knob	Black 17×13	4	
11	Switch button	R13-87	1	
12	PC panel	YS-F502	1	
13	Circuit board cover	YS-2A-104	2	
14	Fuse seat	Round 5×20	1	
15	Potentiometer	BK250	4	
16	Switch power supply	S-250-24V	1	
17	Cord	RVV2-3P 3×1.0	5 meters	



