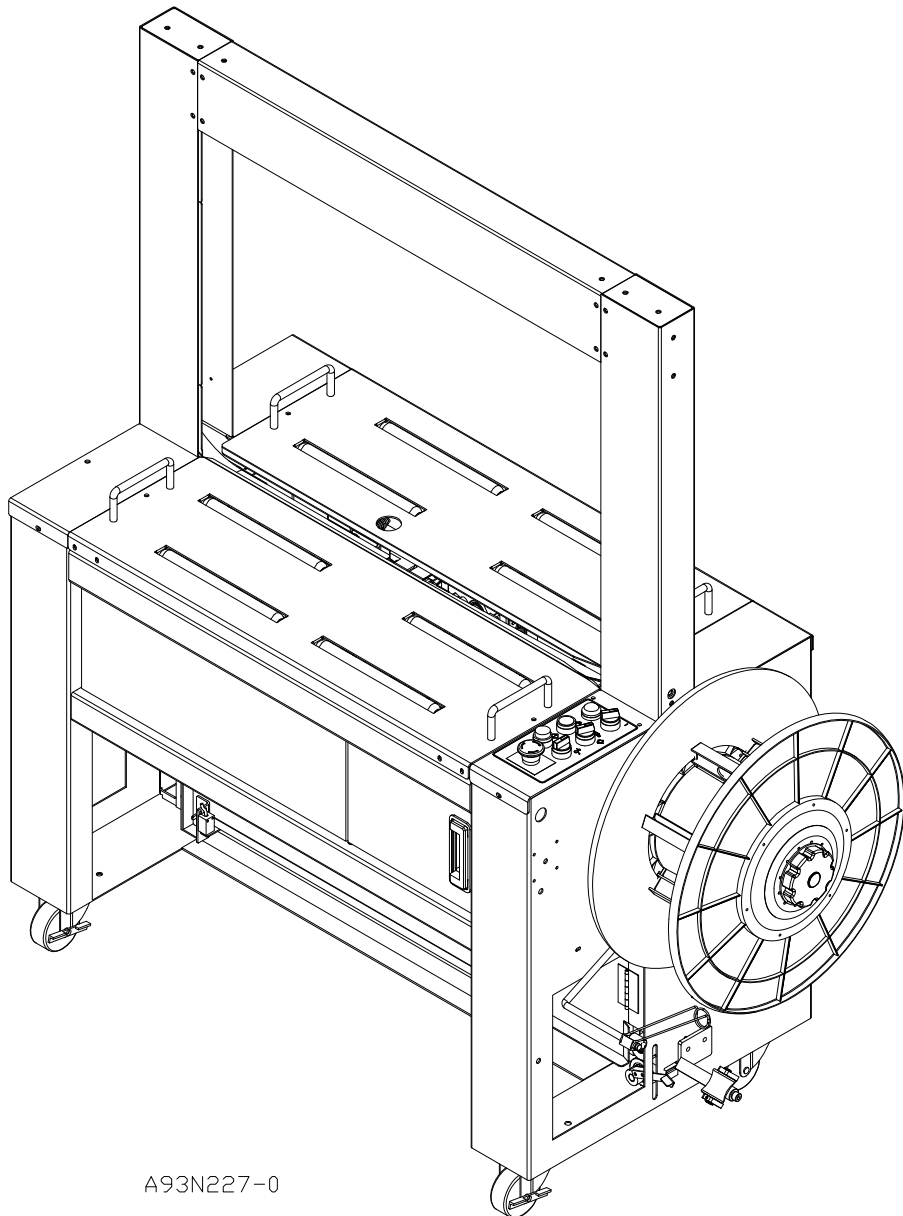


Automatic Strapping Machine
Operator Manual and Spare Parts List

A93N



A93N227-0

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CHAPTER 1 : General

1.1

Preface

- Your patronage in the purchase of our automatic strapping machine is keenly appreciated.
- Each machine's interior and exterior structure is designed, assembled and well tested by our experienced technicians in order to attain brilliant strapping performance.
- Please read this manual thoroughly prior to your use of the machine for better efficiency in operations.

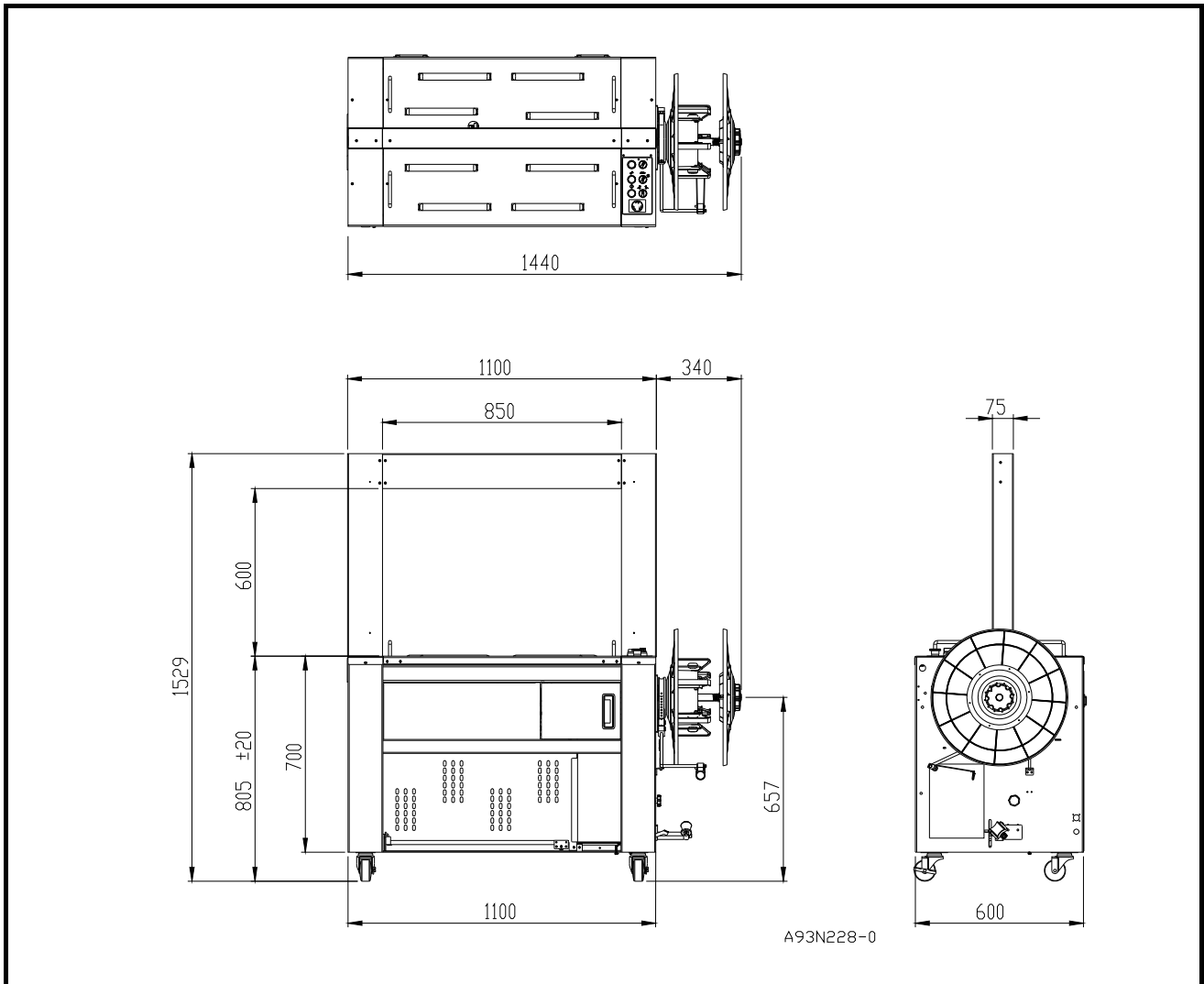
1.2

Safety Instruction

- It is prohibited for unauthorized persons to use the machine!
- Observe all safety precautions and warning signs.
- Do not clean the machine or try to execute repairs while it is under the power-on status → Turn power switch off first.
- Never put any heavy article on power cord which could cause fire or electric shock.
- Do not touch the welding element tongue if the machine has been switched on (operating temperature exceeds 280°C).
- After performing adjustment, make sure to reinstall the cover panels.
- In case of fire it is strictly prohibited to use water for the extinction.
- Follow the instructions provided in this manual.

1.3

Technical data

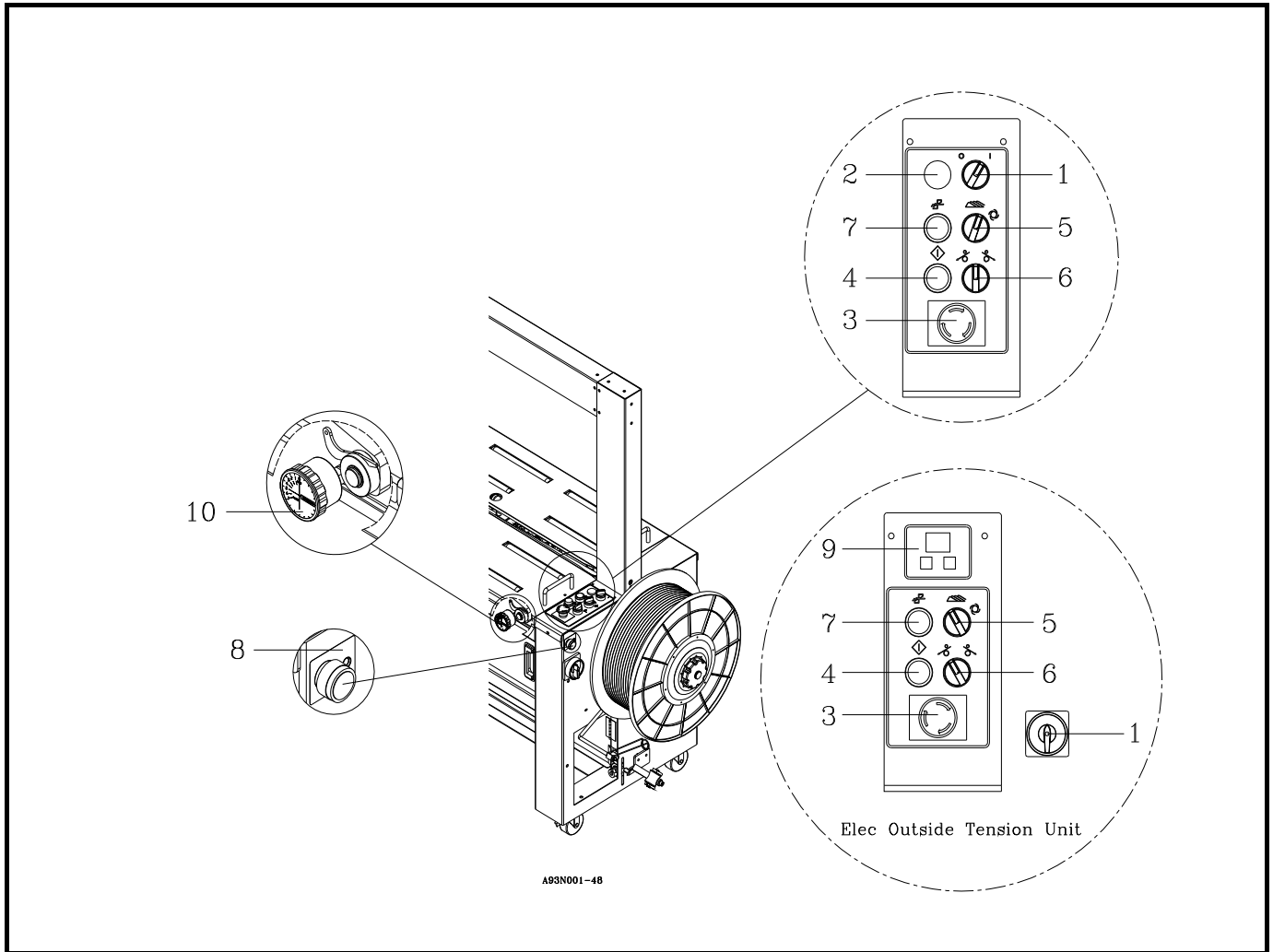


- Model no.: A-93N
- Capacity: Approx. 24 strapping/minute
- Arch size: W850 ×H600mm
- Min. package size: W 100 mm x H 30 mm
- Strap tension: 15 - 70 kg (Adjustable)
- Strap width: 12 mm (1/2")
- Strap dispenser: Inside diameter of coil 200 mm
- Perceived noise level: Approx. 80dBA
- Power consumption: Approx. 1.0KW
- Power connection: 240V/50Hz/1Ph
- Dimensions: 1440W×600L×1529Hmm

CHAPTER 2 : Operation Instruction

2.1

Control Elements



1. Power switch

Position 0 = Power Off.

Position 1 = Power On, heater warm up.

2. Power indicator lamp

Illuminating when power on.

3. E-STOP push button

Push E-stop button in case of emergency. Strapping process stops immediately.

4. Start switch button


Actuate start switch or foot switch to initiate strapping operation.

Push it for strapping operation.

(If strap feeding failed, start button will be flashing.)

5. Selector switch Auto / Manual

5.1 As individual machine

“  ” position: Place package on ball switch for single strapping. Machine will execute strapping continuously, if package stays on ball switch.

“  ” position: Push start switch button for single strapping.

5.2 Connect with the carton sealer:

① Manual mode:

Applying straps according to carton sealer's signals.

② Auto mode:

Do not choose auto mode when two machines are connected.

6. Feeding/Retracting switch

Turn counter-clockwise to feed PP strap.

Turn clockwise to retract PP strap.

7. Reset push button

Reset machine to home position status.

1st pushing: Left strap guide opened.

2nd pushing: Complete one cycle to home position.

8. Auto-Load Push button (Only equipped on auto - load machine)

Insert the strap pass through pool magazine feeding roller for about 7 cm then push the Auto - Load push button (8). The strap accumulating and feeding process will start automatically.

9. Membrane button (Only equipped on electronic tension control type)

Tension increasing by push “ + “ button.

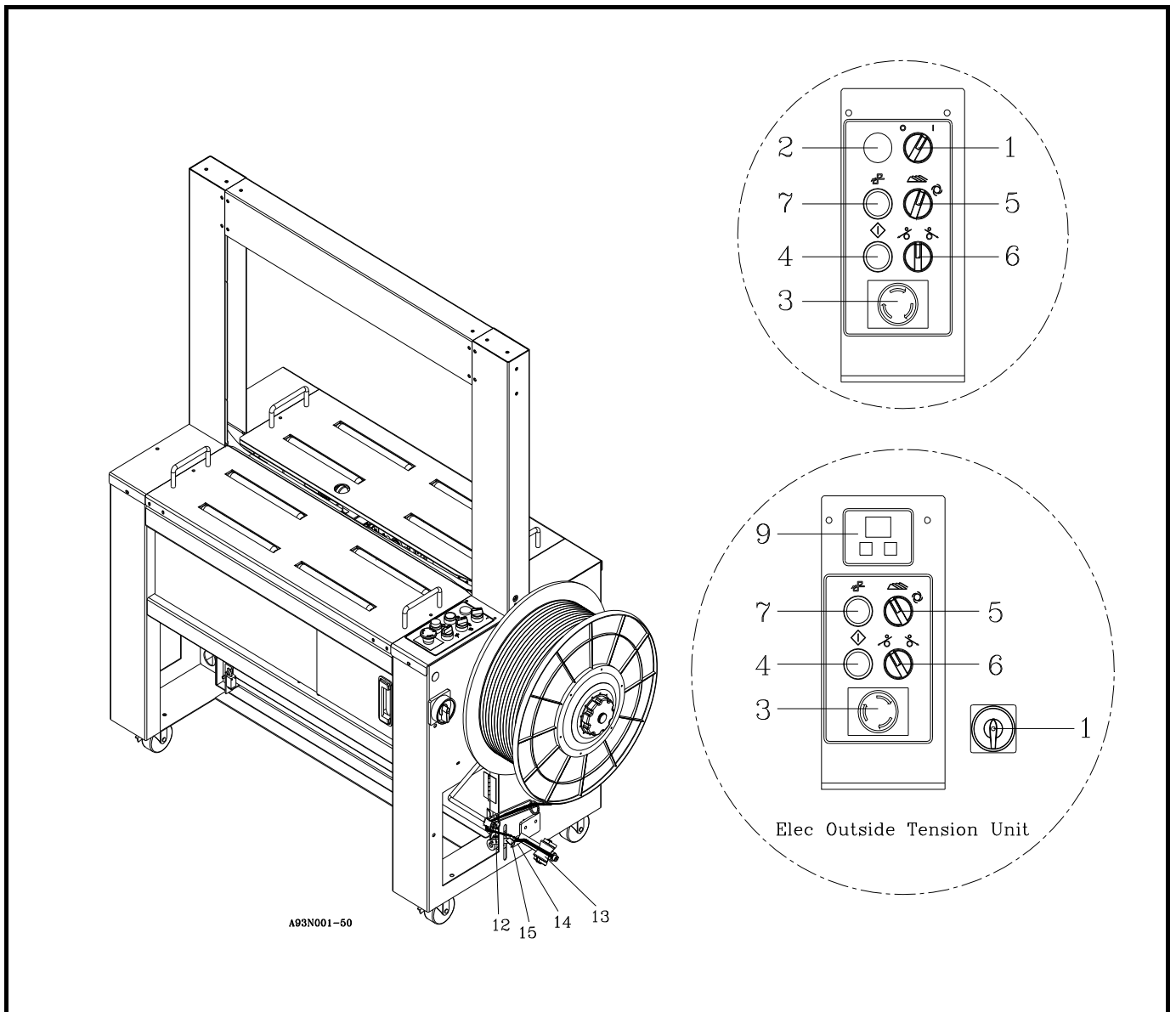
Tension decreasing by push “ - “ button.

10. Tension set knob (Equipped on standard mechanical tension control type)

Set strapping tension by pull out the knob and turn to expect tension scale value then release to lock the knob at setting position.

2.2

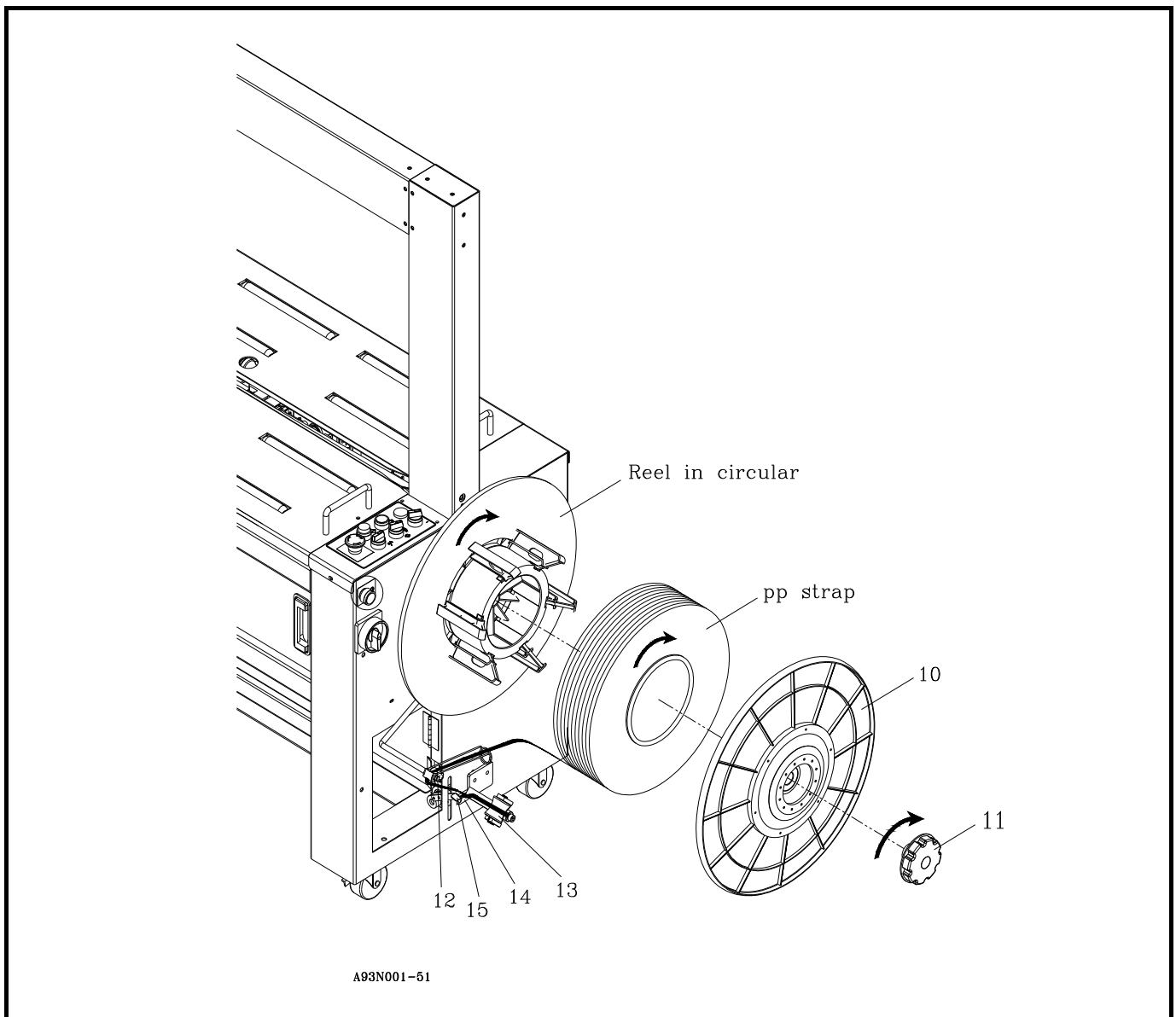
Operating (Standard)



1. Load P.P strap (See 2.3)
2. Turn power switch (1) on. The pilot lamp will illuminate.
3. Release emergency stop push button.
4. Wait for about 30 seconds until the heater element reaches the operating-temperature.
5. Set strapping tension according to 2.1.9 or 2.1.10. per your need, then place a package on the center of sealing head.
6. With selector switch (5) to set required operating modes (see 2.1.5).then execute strapping process by push start button (4) if under manual mode or actuated by ball switch if under auto mode.
7. After operation completed, turn off the power switch (1).

2.3

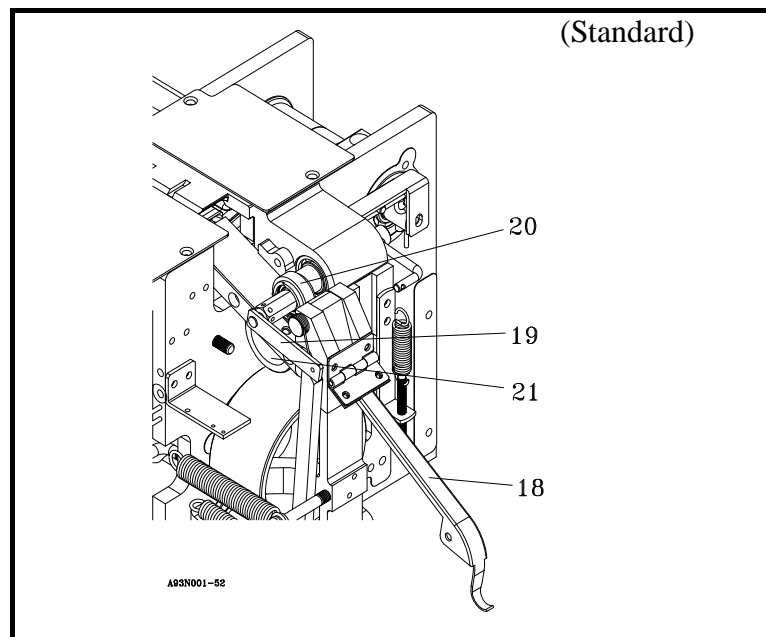
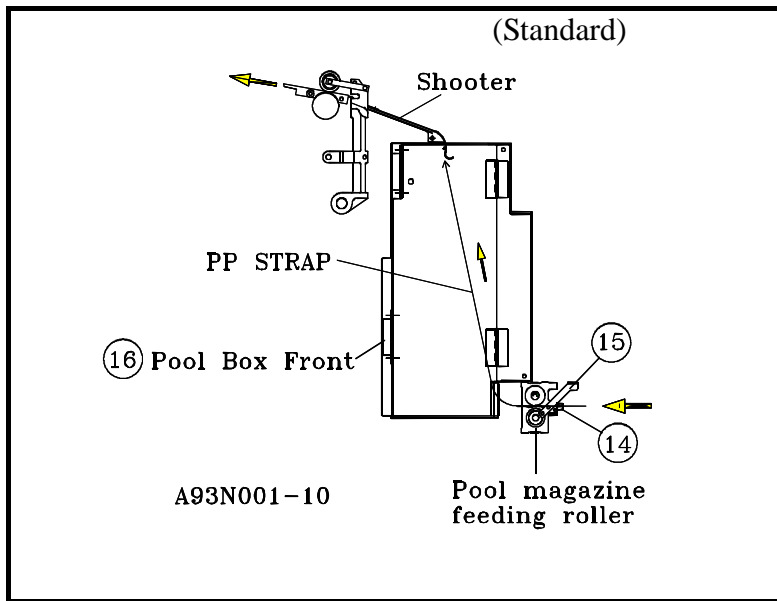
Loading Strap Coil (Standard)



1. Ensure that power supply switch is turned off before setting polypropylene strap.
2. Place strap coil on the reel drum in accord with the arrow direction as indicated on the reel out circular (10). After placing it, put the reel out circular on the strap coil and tighten it by the reel nut handle (11).
3. Thread the tip of PP strap into the strap guide roller (12). After that, push it trough the free angle roller (13). At this moment, twist the strap so that the inside part of the PP strap turns out downward and outside surface touches on the roller. See the drawing.

2.3

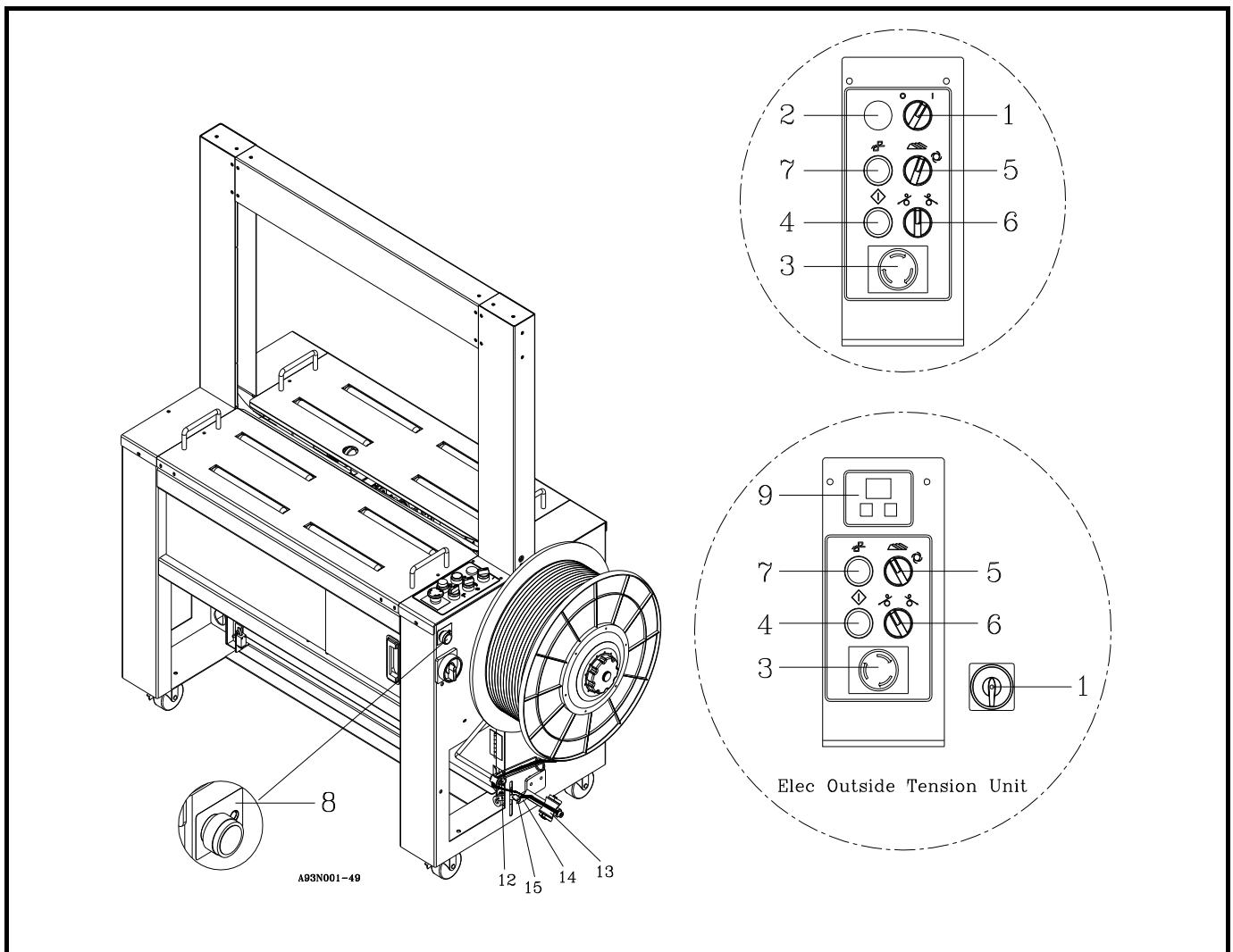
Loading Strap Coil (Standard)



4. Open the door of pool box (16). Insert strap into the pool feed shooter (14) push the lever (15) downward. Pull out about 1 m of the strap through the pool feed shooter (14) and insert it into the pool box. Reaching upper department as drawing shown.
5. Manually turn the upper roller grip (19) counter-clockwise to create a gap between upper roller (20) and lower roller (21), while inserting the tip of strap under the strap cover (18). Release the upper roller grip (19), strap will be held by upper and lower rollers.
6. Turn Feeding / Retracting switch (6) counter-clockwise to feed the strap into arch till reaching the actuating lever to actuate switch ready for strapping.

2.4

Operating (Auto – Load Type)



1. Turn power switch (1) on. The pilot lamp (2) will illuminate.
Release the emergency stop push button (3)
2. Thread the tip of PP strap into the strap guide roller (12). After that, push it trough the free angle roller (13). At this moment, twist the strap so that the inside part of the PP strap turns out downward and outside surface touches on the roller. See the drawing.
3. Push the lever (15) downward. Insert P.P. straps into the inlet guide about 7 cm. Push Auto-Load button (8) to execute strap loading process, as soon as start button (4) turn to illuminate means the feeding process is completed.
4. Wait for about 30 seconds until the heater element reaches the required operating-temperature .
5. Set strapping tension according to 2.1.9 or 2.1.10. per your need.
6. With selector switch (5) to set required operating modes (see 2.1.5).then execute strapping process by push start button (4) if under manual mode or actuated by ball switch if under auto mode.
7. After operation completed, turn off power switch (1).

CHAPTER 3 : Maintenance

3.1 General Notices

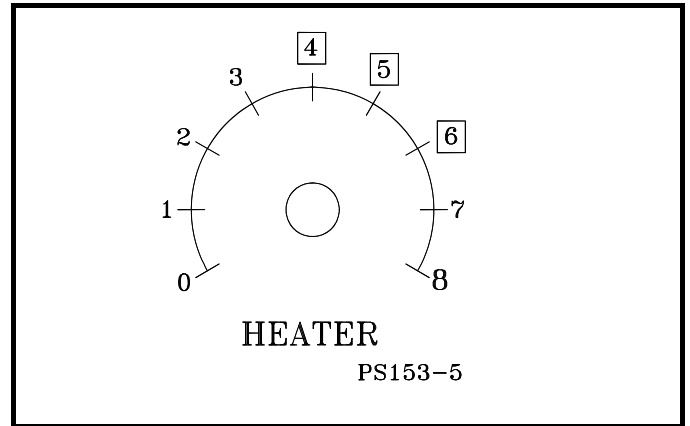
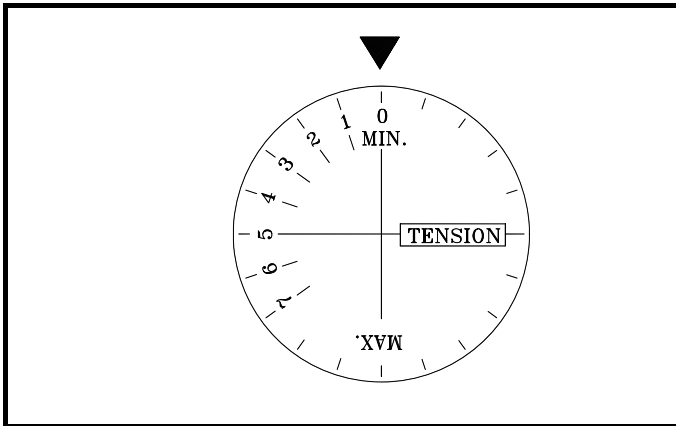
- Turn off power before performing maintenance work or changing strap coil.
- Pull strap out from strap magazine and wind it back to strap coil prevent strap deformation if machine is not in use for a prolonged time.
- If changed electrical outlet socket or cable connector, check rotation direction of motor.
- Keep the machine clean. Follow below instructions to remove contaminations near the sealing unit and deposits on the heater.
- To clean heater tongue only after it cool down.

3.2 Period of Maintenance

Item	Treatment	Period			
		Per Day	Per Week	Per Month	Per Year
Wipe off strap bits	Wiping with hairbrush or clean with vacuum cleaner	●			
Clean heater & heater slide guide.	Eliminate the deposits or dirt on heater surface or slide guide.			●	
Gear motor oil	Open the cover on the top of the gearbox. It's at least over half. If not, add machine oil (SAE 40) in.				●

CHAPTER 4 : Adjustment

Adjustment



4.1 Strap tension

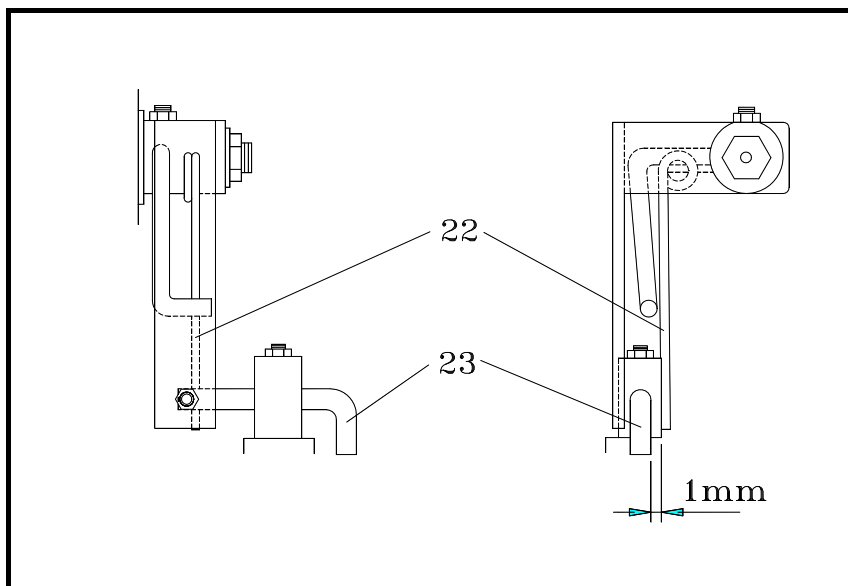
Pull & turn the knob for adjusting tension strength.

The range of strapping tension is 0-7. Normally, the dial position 4 or 5 is suitable for a carton box. Dial No from 7-MAX. is useless on standard machine.

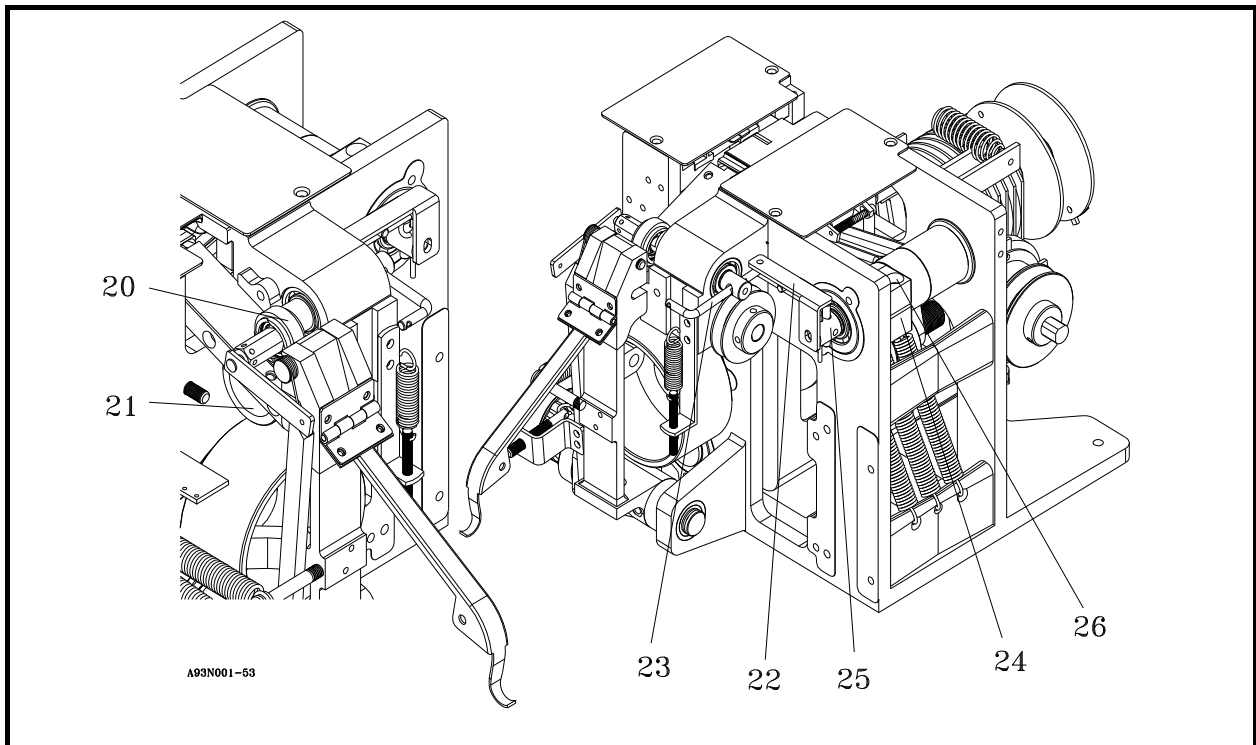
4.2 Heater temperature

Set dial at position 4 or 5 under normal usage.

Choose the suitable temperature, according to climate and working conditions of machine. Turn heater dial gradually higher or lower to select the proper temperature for best sealing.



Adjustment



4.3 Feeding / Retracting spring force

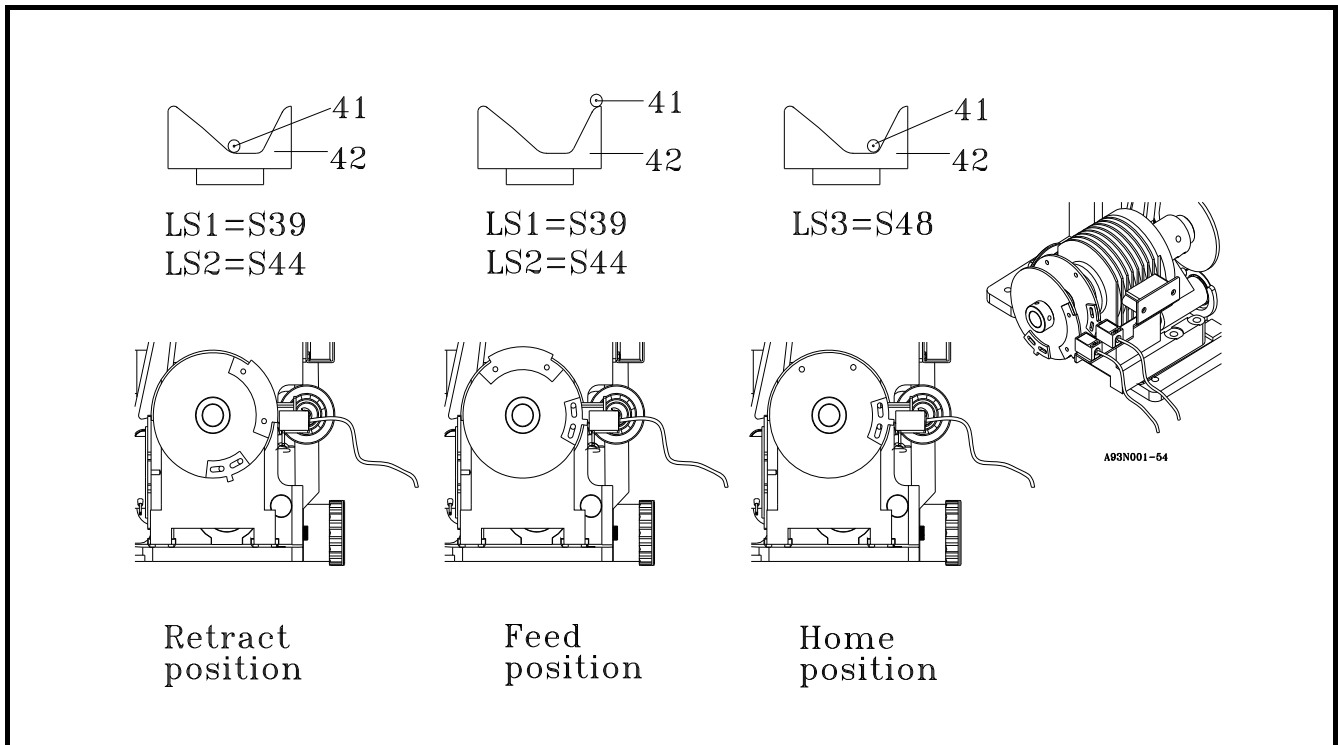
Adjust the clearance between related parts for keeping proper spring force on strap by feed roller (21) and upper roller (20) to ensure stable feeding and retracting process.

Original setting is for PP strap with thickness of 0,55mm - 0,65mm.

When thickness of strap varies, follow below steps to adjust the clearance between related parts:

1. Insert the strap between feed roller (21) and feed upper roller (20).
2. Loosen 2 bolts (26) holding the right-hand block arm (24) with the press arm shaft (25). Press arm shaft then moves easily by hand.
3. Adjust to have a clearance about the thickness of strap between the upper roller spring (22) and the upper shaft spring hook (23).
4. Tighten 2 bolts (26)

Adjustment



4.4 Home Positioning

Home position is determined by proximity sensor S48 and corresponding cam.

Execute one strapping cycle to confirm if the cam follow stops at the correct relative position (see drawing) with tension cam. If not, loose screw and rotate the cam appropriately to let proximity sensor S48 detecting the bulge point of cam for sending signal at appropriate time to stop cam shaft where cam follow just at the correct relative position with tension cam.

4.5 Retracting positioning

Retracting positioning is determined by proximity sensor S39 and first bulge part of corresponding cam.

Push Reset button once, cam shaft will rotate and stop at the retracting status where the cam follow is stop at the correct relative position with tension cam. (see drawing). If not, loose screw and rotate the cam appropriately to let proximity sensor S39 detecting the bulge point of cam for sending signal to stop cam shaft and makes cam follow stop at the correct relative position with tension cam.

4.6 Feeding positioning

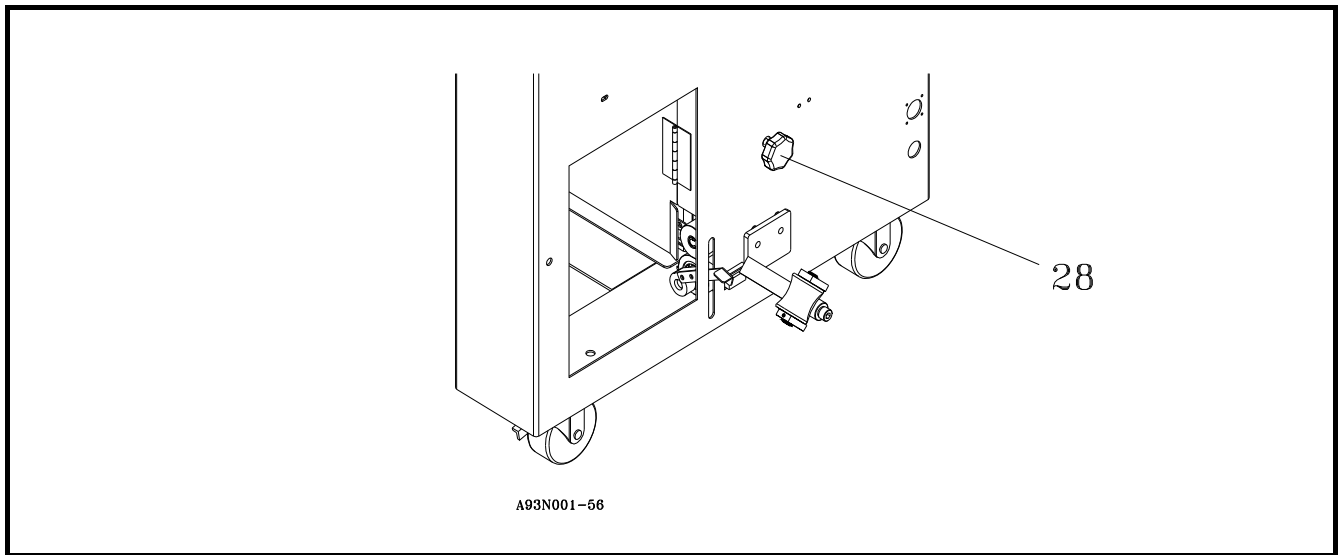
Feeding positioning is determined by proximity sensor S39 and second bulge part of corresponding cam.

Rotate the cam shaft turn reversely by pulling the V-belt until the cam follow is stop at the correct relative position (see drawing) with tension cam

(see drawing, three quarters of the cam follow just get over the peak profile of tension cam but one Quarter still hanging on the midair.)

Under above status, loose screw of the second bulge part of cam to adjust it to appropriate position for proximity sensor S39 detection. (light on).

Adjustment



4.7 Amount of strap magazine

1. In case amount of strap is insufficient in pool box, turn the star grip (28) counter-clockwise.
2. In case amount of strap is excessive in pool box, turn the star grip (28) clockwise.

4.8 Timer on PCB

— Timer F0

Timer F0 (or VR3) determines the time for strap retracting during strapping cycle. Set proper time (as short as possible but required to encircle the minimum size of package completely before execute second tension) .. Normally, timer F0 is set at about 0.4 seconds, but should be adjusted depending on the package size.

— Timer F1

Timer F1, determines the time for feeding the strap to the stopper at the sealing head The strap is fed according to the preset time on the dial of timer F1. If the setting time is too short, strap may not reach to the stopper at the sealing head and cause the feeding error. Normally, timer F1 is set at about 0.8 seconds, but may have to be adjusted depending on the arch size.

CHAPTER 5 : Troubleshooting

Troubleshooting

Trouble	Cause	Remedy
Machine does not work but pilot lamp is ON.	<ol style="list-style-type: none"> 1. E-button malfunction 2. Safety Switch malfunction 3. Overload Relay tripped or malfunction 4. Fuse blowout 	<ol style="list-style-type: none"> 1. Replacement 2. Replacement 3. Reset or replace overload relay 4. Replacement
Machine does not work and pilot lamp is OFF.	<ol style="list-style-type: none"> 1. Fuse blowout 2. Power supply malfunction (GS1) 3. No power 	<ol style="list-style-type: none"> 1. Replacement 2. Replacement 3. Check power supply
Strap feeding failed	<ol style="list-style-type: none"> 1. Proximity switch of short feeding malfunction 2. Motor malfunction 3. Pulley loosed 4. Improper adjustment of feeding spring 	<ol style="list-style-type: none"> 1. Replacement 2. Replacement 3. Tighten set screws of Pulleys 4. Proper adjustment of feeding spring position
Strap retracting failed	<ol style="list-style-type: none"> 1. Retracting time too short 2. Pulley loosed 3. Improper adjustment of retracting spring 4. Improper adjustment of arch flaps 5. Right and Left Bandway malfunction 	<ol style="list-style-type: none"> 1. Reset retracting time 2. Tighten pulley 3. Readjust gap of retracting spring (ref. to_____) 4. Readjust arch flaps 5. Adjust right and left bandway
Strap feeding out of arch or incessantly	<ol style="list-style-type: none"> 1. PC board transistor malfunction 2. PP strap out of arch flags due to big gap 3. PP strap out of right bandway due to incorrect height of left bandway 4. Left Bandway doesn't return 	<ol style="list-style-type: none"> 1. Replace PC board 2. Readjustment of arch flaps 3. Readjustment height of right bandway 4. Adjust Left bandway and make it working correctly
Package cannot be strapped well because of strap cannot escape from track flaps completely during retracting process.	<ol style="list-style-type: none"> 1. Force of retracting is weak 2. Left bandway doesn't open 3. Short retracting time 4. Improper spring gap of arch flaps 	<ol style="list-style-type: none"> 1. Readjust gap of retracting 2. Check if left bandway out of shape or damaged 3. Increase retracting time 4. Readjust arch flaps
Incessant retracting	<ol style="list-style-type: none"> 1. PC board transistor malfunction 2. Improper setting of retracting time 	<ol style="list-style-type: none"> 1. Replace PC board 2. Reset PC board

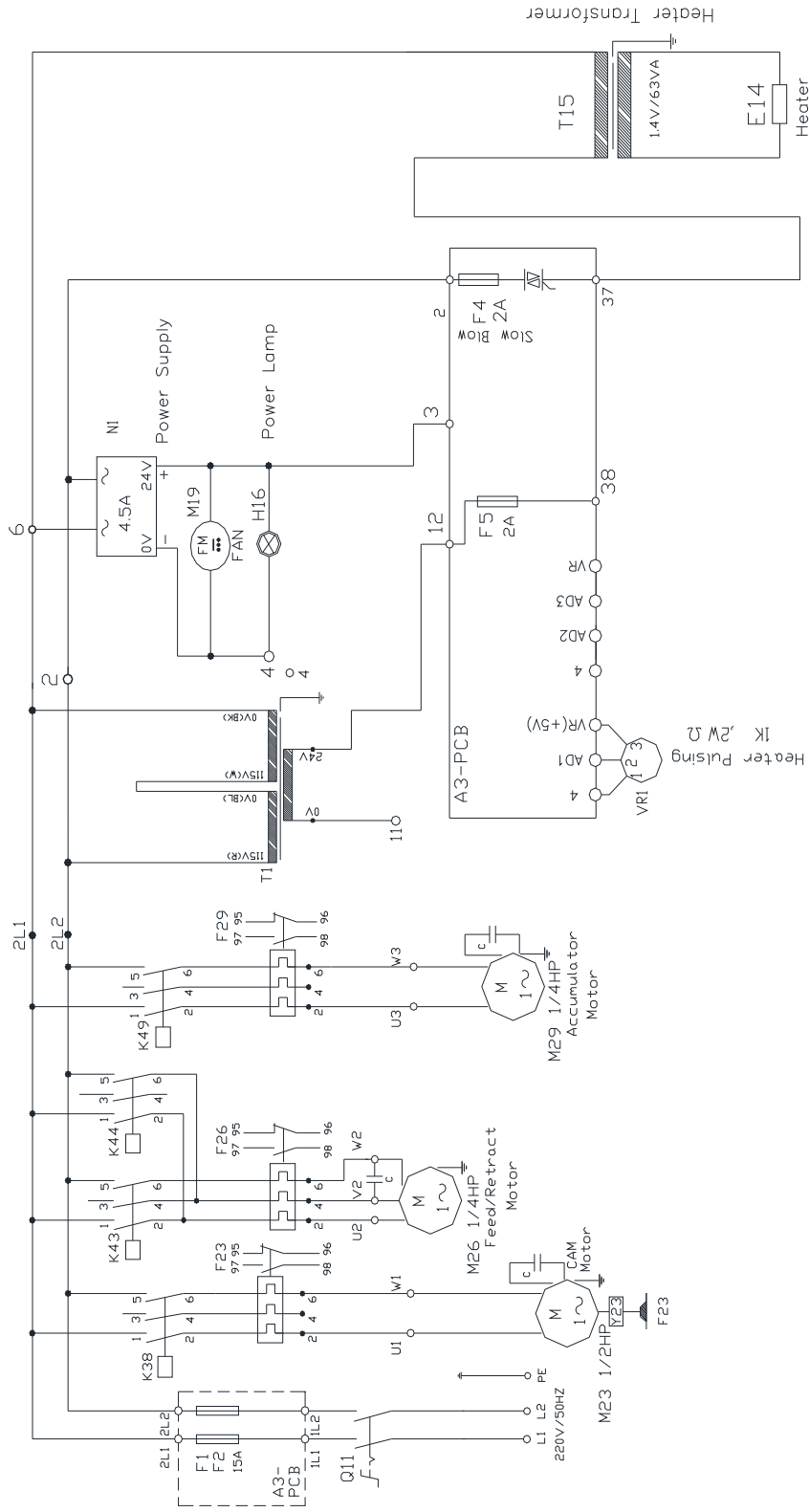
Troubleshooting

Trouble	Cause	Remedy
Abnormal mechanical movements after pushing start button, ex: marked points are out of alignment or cam shaft doesn't stop after cycle completed.	<ol style="list-style-type: none"> 1. Brake worn out 2. Proximity switch of Positioning malfunction (S48) 3. Reducer malfunction 4. Connecting shaft loosed between reducer and cam shaft 	<ol style="list-style-type: none"> 1. Readjust or replace 2. Replace proximity switch 3. Replace reducer 4. Tighten connecting shaft
Poor strap cutting	<ol style="list-style-type: none"> 1. Spring loosed or force is weak 2. Dull press bar or cutter gripper 	<ol style="list-style-type: none"> 1. Adjust spring of press bar 2. Replace press bar or cutter gripper
Strap feeding failed	<ol style="list-style-type: none"> 1. Force of feeding is weak 2. Arch flaps are blocked 3. Machine cannot feed PP strap through cutter gripper to sealing point due to incorrect height of right bandway 	<ol style="list-style-type: none"> 1. Adjust spring for feeding force 2. Clean up dust among arch flaps and track. 3. Adjust height of right bandway and fix it.
Temperature of heater abnormal	<ol style="list-style-type: none"> 1. Temperature too high (System crashed) 2. PC board transistor malfunction 3. Heater is cold, fuse blowout or heater plate broken 	<ol style="list-style-type: none"> 1. Reboot machine 2. Replace PC board 3. Replace fuse or heater plate
Temperature of heater plate correct but poor sealing	<ol style="list-style-type: none"> 1. Poor movement of heater set slide 2. Carbon deposition on heater plate 3. Both sides of strap are not aligned 	<ol style="list-style-type: none"> 1. Clean up slide 2. Clear up carbon deposition 3. Adjust right and left bandways
Auto loading function unworkable	<ol style="list-style-type: none"> 1. Proximity switch of accumulation failed 2. B1 Proximity switch malfunction 3. Proximity switch of short feeding malfunction 4. Auto loading switch malfunction 	<ol style="list-style-type: none"> 1. Adjust gap between Alu. Lever and proximity switch 2. Adjust position of sensor lever or replace proximity switch 3. Clean up and adjust short feeding sensor lever or replace proximity switch 4. Replacement
Lack of tension	<ol style="list-style-type: none"> 1. Poor movement of tension Jaw 2. Worn tension Jaw 3. Tension jaw spring disconnected or broken 	<ol style="list-style-type: none"> 1. Clean up actuated position 2. Replacement 3. Replace jaw spring correctly
Volume of accumulator too much or too little.	<ol style="list-style-type: none"> 1. Poor movement of Alu. lever. 2. Stretching bolt loosed and position moved 	<ol style="list-style-type: none"> 1. Clean up shaft or replace bearing 2. Lock it properly after readjustment

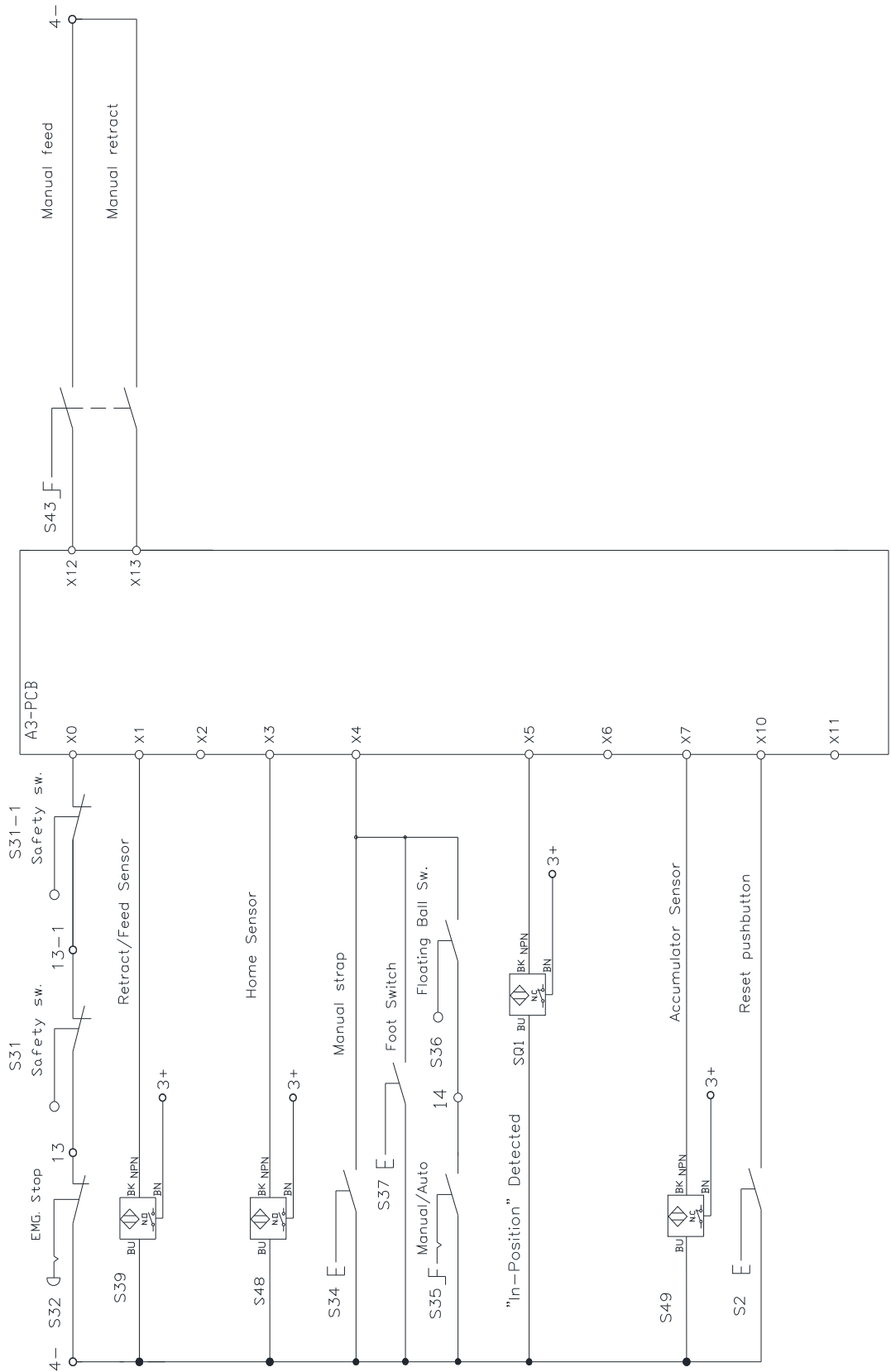
CHAPTER 6 : Electrical diagram

6.1

Main circuit

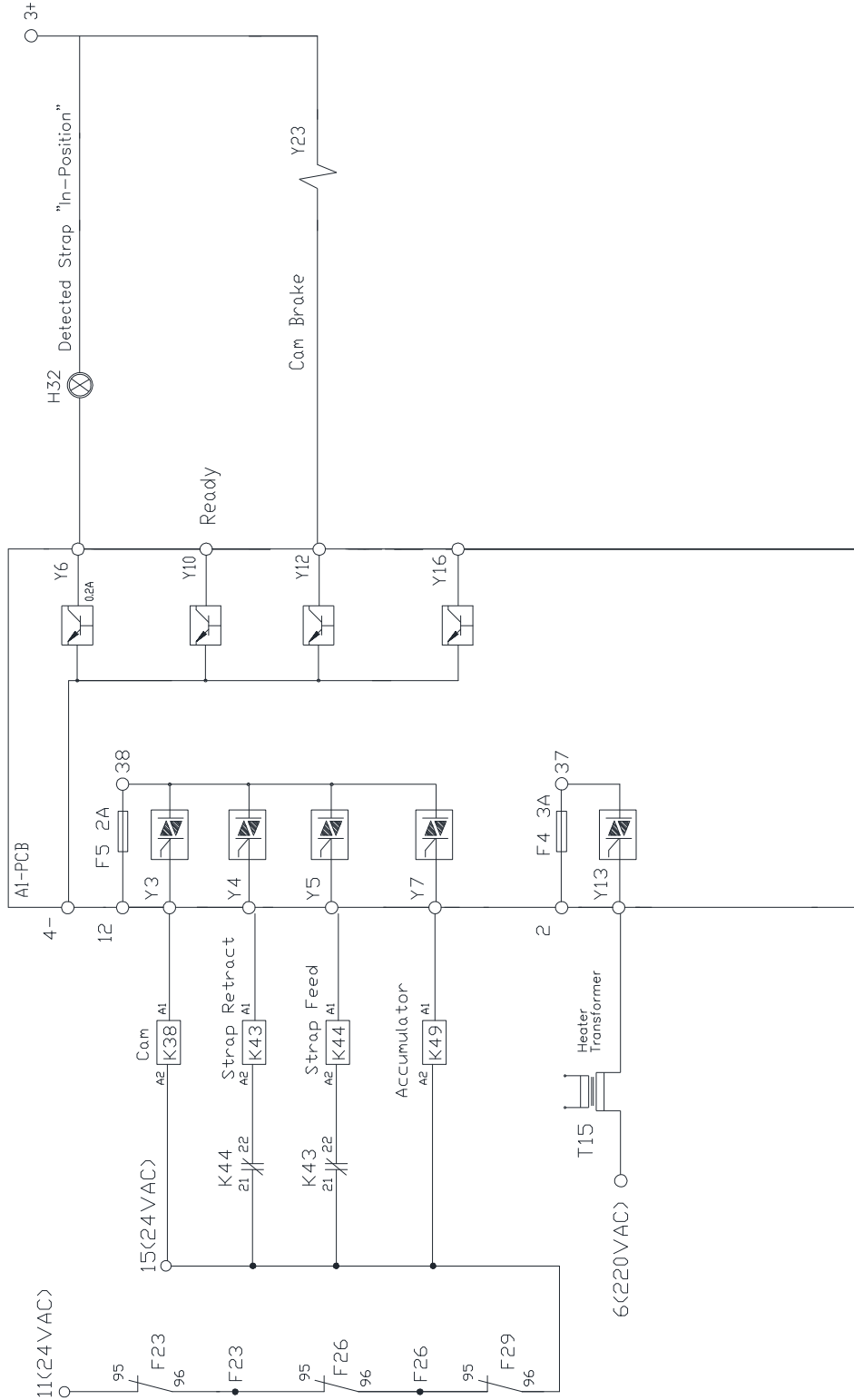


Input Connecting Diagram



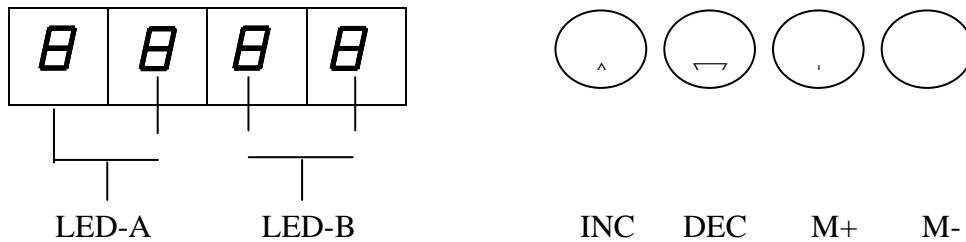
6.3

Output Connecting Diagram



Parameter	Description	Range	Unit
P0	Empty Strap 00 → NO / 01 → YES	00–01	
P1	Start the machine 00 → YES / 01 → NO	00–01	
P2	Dispenser 00 → Standard / 01 → Electronic brake	00–01	
P3	Looping ejector 00 → NO / 01 → YES	00–01	
P4	Weld cooling time 00 → internal / 01 → External	00–01	
P5	Auto feed 00 → NO / 01 → YES	00–01	
P6	Alarm(Buzzer) 00 → NO / 01 → YES	00–01	
P7	Re-feeding 00 → NO / 01 → YES	00–01	
F0	Retracting time	0.3–2.3S	0.1S
F1	Feeding time	0.7–2.7S	0.1S
F2	Weld cooling position	0.3–0.6S	0.1S
F3	Weld cooling time	0.0–1.0S	0.1S
F4	Heater temperature lower limit	0.30–0.99S	1%
F5	Heater compensate time	1.5–6.0S	0.1S
F6	Instant heating time	25–35S	1S
F7	Heating temperature upper limit	45–95	1%
E0	Heater delay position	0.1–0.6S	0.01S
E1	Heater delay time	0.1–0.4S	0.1S
E2	Re-retraction counter(with looping ejector)	00–99	
E3	Re-feeding time (with looping ejector)	0.2–0.7S	0.01S
E4	Feeding in position 00 → NO / 01 → YES	00–01	
E5	Reserved		
E6	Store the settings		
E7	Recover to ex-work setting		
H0	Reserved		
H1	Reserved		
H2	Counter	1 st , 2 nd digit, XXXXXX88	
H3	Counter	3 rd , 4 th digit, XXXX88XX	
H4	Counter	5 th , 6 th digit, XX88XXXX	
H5	Counter	7 th , 8 th digit, 88XXXXXX	
H6	Manufacture month	Read only	
H7	Manufactured year	Read only	

A93N PCB Settings



(A)

1. LED-A : Functions mode.
2. LED-B : Parameter values.
3. INC : Function mode increase P0→P7→F0
4. DEC : Function mode decrease P0→H7→E7
5. M+ : Increasing of Parameter value.
6. M- : Decreasing of Parameter value.

(B) Procedures of functions parameter settings

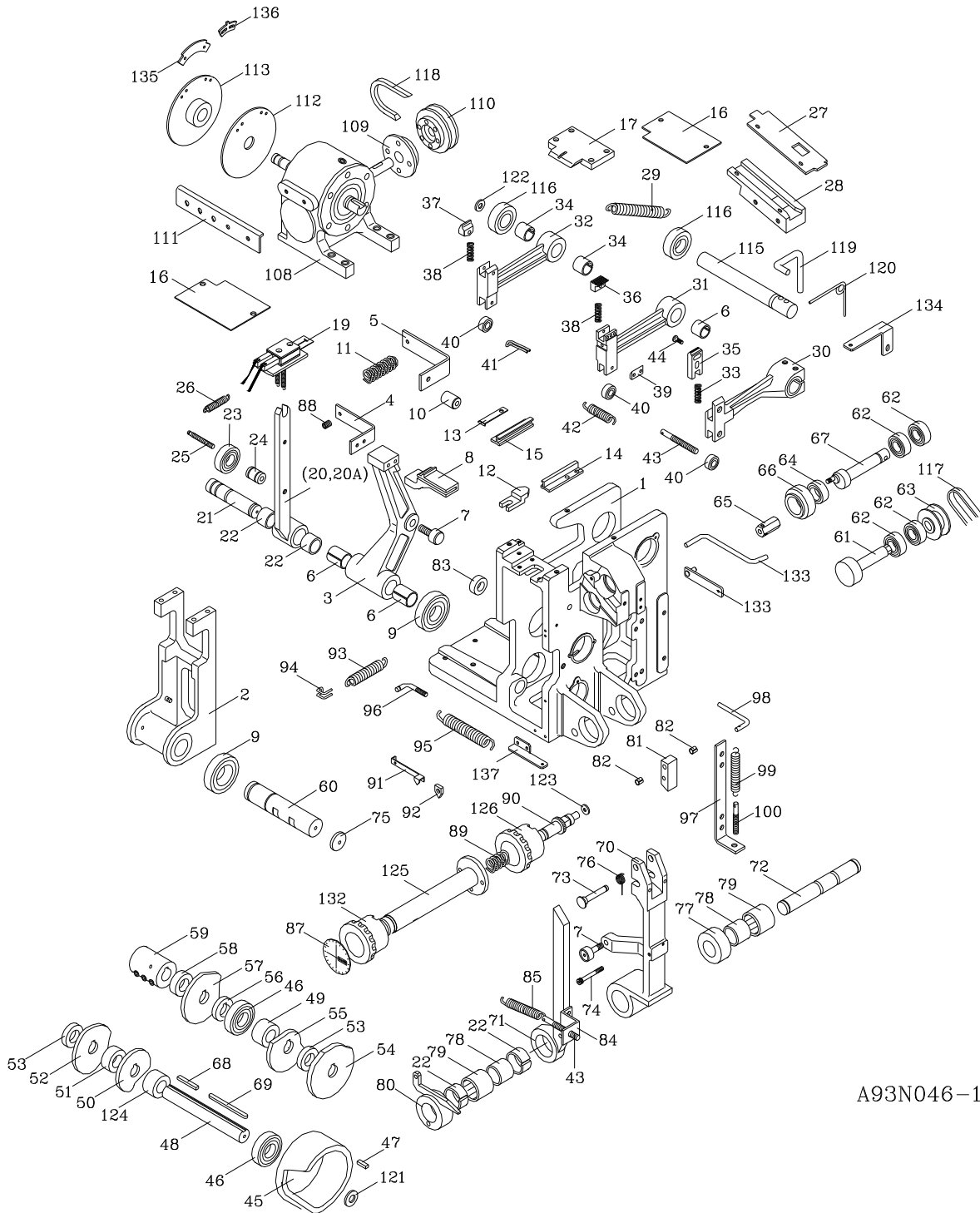
- (1) Push “M+”“M-” Simultaneously for 3 seconds them LED Flashing which means enter in setting mode.
- (2) Push “M+”or“M-”to select the function mode.
- (3) To push “INC”or“DEC” to change the parameters values.
- (4) To store the value by pushing “M+”and“M-” simultaneously.
- (5) If idle for 3 minutes then LED returns to counter automatically.

(C) Read mode

To push either “M+”or“M-”to read the current setting values.

Part List

Control unit



A93N046-1

7.1

Control unit

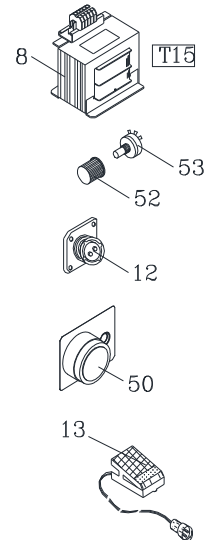
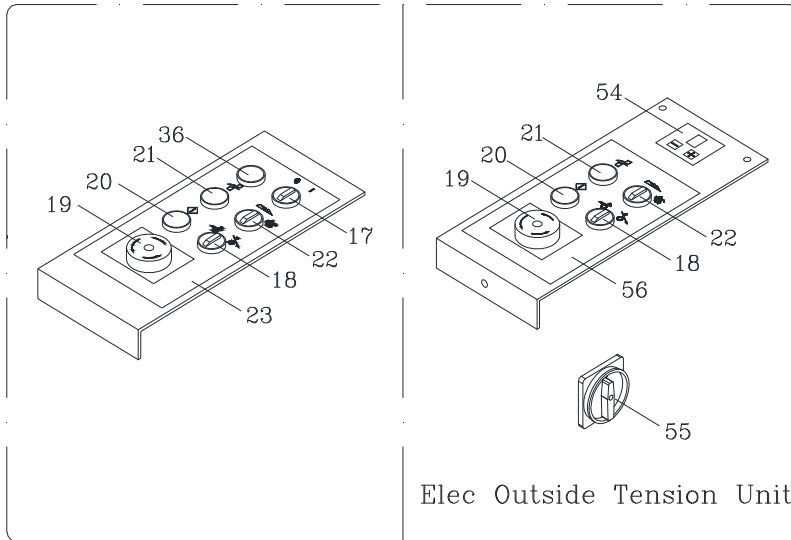
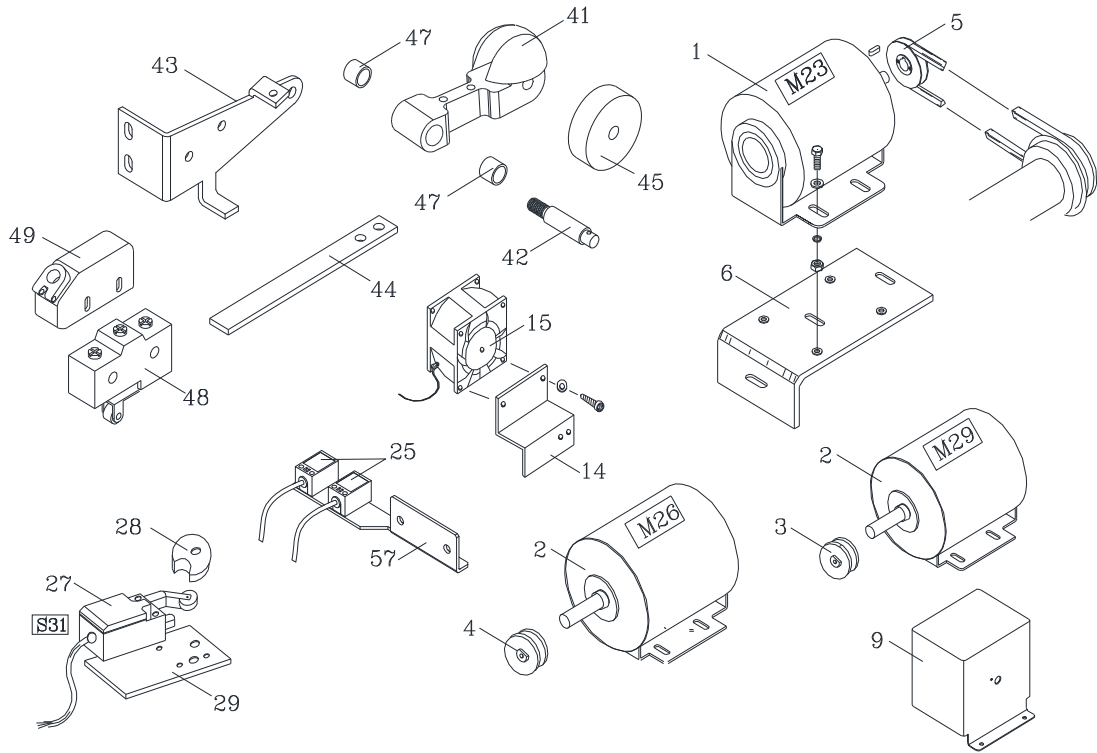
No.	Part No.	Part Name	Q'Ty
1	A20-150001	Control Frame	1
2	A20-123050	Slide Table Frame	1
3	A20-121001	Band Guide Arm	1
4	A20-120008	Flap Connecting Spring Bracket	1
5	A20-122002	Band Guide Spring Bracket	1
6	G01-202325	Metal Bush, MB2025	3
7	G07-221210	Cam Follower, KR22xLL	2
8	A20-120007	Band Guide	1
	A20-120007AAA	Band Guide (short feeding system with alarm)	1
9	G04-216304	Ball Bearing, 6304ZZ	2
10	A20-120004-1	Slide Table Back Adjuster	1
11	A20-122001	Band Guide Spring	1
12	A20-150002-1	Band Width Block	1
13	A20-140007	Heater Stopper	1
14	A20-140004	Heater Slider Guide (A)	1
15	A20-140003	Heater Slider Guide (B)	1
16	A93N-150003-0	Slide Table Cover	2
17	A20-120003-2CAA	Slide Table (9mm)	1
	A20-120003-2DAA	Slide Table (12mm)	1
	A20-120003-2EAA	Slide Table (15mm)	1
19	A20-143000N	Heater Set	1
	A11-141000-1	Heater Set (Conventions)	1
20	A11-142150-1	Heater Crank	1
21	A20-140005	Heater Crank Shaft	1
22	G01-202315	Metal Bush MB2015	4
23	G04-216304	Ball Bearing, 6304ZZ	1
24	A20-142003	Heater Crank Collar	1
25	A20-142002	Heater Bearing Shaft	1
26	A20-140002	Heater Crank Spring	1
27	A20-171008	Feed Shooter Cover	1
28	A20-171007-1CAA	Feed Shooter (9mm)	1
	A20-171007-1DAA	Feed Shooter (12mm)	1
	A20-171007-1EAA	Feed Shooter (15mm)	1
	A20-171013-0CAA	Feed Shooter (9mm) (30Strapping/minute)	1
	A20-171013-0DAA	Feed Shooter (12mm) (30Strapping/minute)	1
	A20-171013-0EAA	Feed Shooter (15mm) (30Strapping/minute)	1
29	A20-130005	Press Tension Spring	3
30	A20-131001	RH, Block Arm	1
31	A20-132001	Center Block Arm	1
32	A20-133001	LH. Block Arm	1

No.	Part No.	Part Name	Q'Ty
33	A20-131004	RH. Block Spring	1
34	G01-202320	Metal Bush, MB2020	2
35	A20-131005-0	Cutter Upper	1
	A20-131002-0FAA	Cutter Upper 19mm	1
	A20-131005-0K	Cutter Upper (30Strapping/minute) SKD-11	1
	A20-131002-2K	Cutter Upper SKD-11	1
36	A20-132002	Universal Press	1
37	A20-133002	Jaw Left	1
38	A20-132005	LH & Center Block Spring	2
39	A20-132003-1	Cutter Lower	1
40	G04-210628	Ball Bearing, 628ZZ	3
41	A20-132004	Cutter Spring Hook	1
42	A20-130006	Cutter Tension Spring	1
43	A20-130002	Cutter Tension Spring Hook	2
44	A20-131003-1	Cutter Upper Pin	1
45	A20-110001	Tension Cam	1
	A20-110001T	Tension Cam(30 Strapping/minute)	1
46	G04-216205	Ball Bearing, 6205ZZ	2
47	W37-070720	Key, 7x7x20 (Square)	2
48	A20-111006	Cam Shaft	1
49	A20-111008-1	Collar 28.8x34x28.3	1
50	A20-111002	RH Press Cam	1
51	A20-111009	Collar 28.8x34x20	1
52	A20-111015-2	Center Press Cam	1
	A20-111003-1	Center Press Cam (Conventions Heater Plate Type)	1
53	A20-111010	Collar 28.8x34x8	2
54	A20-111004	Heater Cam	1
55	A20-111005	LH. Press Cam	1
56	A20-111011	Collar 28.8x34x5.5	1
57	A20-111001	Slide Table Cam	1
58	A20-111012	Collar 28.8x34x14	1
59	A20-111007	Cam Shaft Coupling	1
60	A20-120002	Slide Table Frame Shaft	1
61	A20-171201	Feed Roller	1
62	G04-216202(K1930140154)	Ball Bearing, 6202ZZ	4
63	A20-171006	Feed Roller Pulley (50/60HZ)	1
	A93-171008-1	Feed Roller Pulley (30 Strapping/minute)(1Ph)	1
64	G04-210628	Ball Bearing, 628ZZ	1
65	A20-171005-1	Lever Holder	1
	A20-171011-0	Lever Holder (Standard)	1

No.	Part No.	Part Name	Q'Ty
66	A20-171103-0CAA	Feed Upper Roller (9mm)	1
	A20-171103-0DAA	Feed Upper Roller (12mm)	1
	A20-171103-0EAA	Feed Upper Roller (15mm)	1
67	A20-171003	Feed Upper Roller Shaft	1
68	W37-070748	Key 7x7x48 (Square)	1
69	W35-070790	Heater & Press Cam Key 7x7x90	1
70	A20-161001	Tension Arm	1
71	A20-165150	Tension Adjust Arm	1
72	A20-160001	Tension Arm Shaft	1
73	A20-161002	Tension jaw Shaft	1
74	A20-161003	Tension Arm Spring Hook	1
75	A20-120010	End Plate	1
76	A20-161004	Tension Jaw Spring	1
77	A20-160004-1	Tension Arm Spacer	1
78	G13-202516	Needle Bearing, IR202516	2
79	G10-253216	Needle Bearing, HK2516	2
80	A20-164150	Tension Adjuster	1
81	A20-162001A	Tension Jaw (PET)	1
	A20-162001	Tension Jaw (PP)	1
82	G01-081008	Metal Bush, MB0808	2
83	A20-120005-1	Slide Table Stopper	1
84	A20-165003	Spring Hook	1
85	A20-160003	Tension Adjust Spring	1
87	A20-163003	Plate (Tension Select Dial)	1
88	A20-410003	LH Bandway Stop Spring	1
89	A20-163004	Tension Adjust Cam Spring	1
90	A20-163002-1	Tension Adjust Shaft	1
91	A20-163009	Tension Indicated Arm	1
92	A20-163005	Tension Adjust Cam Lock	1
93	A20-120012	Slide Table Tension Spring	1
94	A20-120011	Slide Table Spring Hook	1
95	A20-160002	Tension Arm Spring	1
96	A20-160006-1	Tension Arm Spring Hook L-Type	1
97	A20-173001	Upper Adjust Base	1
98	A20-173002	Upper Adjust Spring Hook	1
99	A20-173004	Upper Adjust Spring	1
100	A20-173003	Upper Adjust Spring Rod	1
108	A93-112000	Gear Box	1
	A93-112000B	Gear Box (30 Strapping/minute)	1
109	E21-010002S	Stator (111-06-13S B-S50 24V11W)	1
	E21-010004S	Stator (FBD-1.2 24V 15W)	1
110	A20-110007R1A	Gear Box Pulley Assembly(11W)	1
	A20-110016A	Gear Box Pulley Assembly(15W)	1

No.	Part No.	Part Name	Q'Ty
111	A20-110017-0	Proximity Switch Bracket	1
112	A20-113250-0	Limit Switch Contact (S48)	1
113	A20-113250-0	Limit Cam (S39,S44)	1
115	A20-130001	Press Arm Shaft	1
116	G04-216304	Ball Bearing 6304ZZ	2
117	G16-010023	V-Belt, M-23 (60HZ)	1
	G16-010022	V-Belt, M-22 (60HZ, 3Ph)	1
	G16-010021-2	V-Belt, M-21 (50HZ/60HZ, 1Ph)	1
118	G16-020026	V-Belt, A-26 (60HZ)	1
	G16-020027	V-Belt, A-27 (50HZ)	1
119	A20-130011-0	Upper Shaft Spring Adjuster	1
120	A20-130010-0	Upper Roller Spring	1
121	A20-110002	Cam Shaft End Plate	1
122	A20-130007	End Plate	1
123	A20-163008	Tension Adjust Bolt Spacer	1
124	A20-111008-2	Collar 28.8x34x27.8	1
125	A93-320250	Tension Adjust Shaft	1
126	A93-320003	Tension Adjust Cam (Outside Tension Adjust)	1
	A20-163001	Tension Adjust Cam (Inside Tension Adjust)	1
132	A93-320004	Outside Tension Adjust Cam	1
133	A20-171250-0	Lever (Auto-Load)	1
	A20-171012-0	Lever (Standard)	1
134	A20-240025	Adjust Rod	1
135	A20-113001-0	Retracking Sensor Block	1
136	A20-114001-0	Sensor Block	1
137	A20-163020-1	Limit Plate	1

Electric control unit



A93N011-7

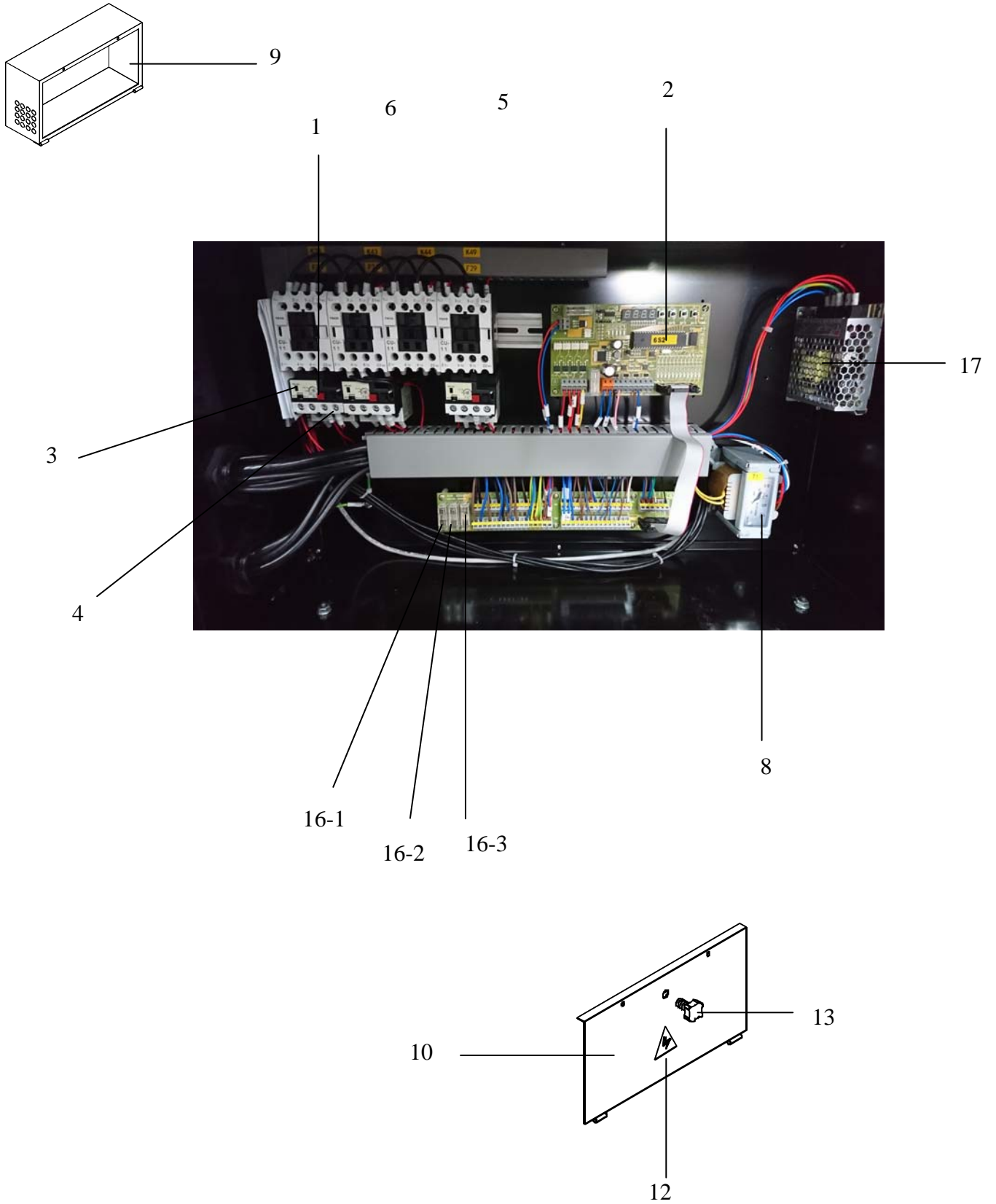
Electric control unit

No.	Part No.	Part Name	Q'Ty
1	E01-010028	Motor Sealing (M23) 230/400V 1/2HP 50/60Hz	1
	E01-010028KA	Motor Sealing (M23) 200/400,1/2HP 50/60Hz	1
	E01-010065	Motor Sealing (M23) 230V,50Hz,400W (Single Phase)	1
	E01-010064	Motor Sealing (M23) 110V/60Hz/500W	1
2	E01-010023	Motor (M26/29-50Hz) 230/400V 1/4HP 50Hz	2
	E01-010038	Motor (M26/29-50Hz) 0.24kw/230V 50Hz (Single Phase)	2
	E01-010038-1	Motor(M26/29-60HZ) 220V/0.25KW	2
	E01-010039	Motor(M26/29-60HZ) 110V/0.24KW	2
3	A93-171010-0	Motor Pulley M3 (50/60HZ/Single Phase)	1
	A93-171009-0	Motor Pulley M3 (50/60HZ/3Phase)	1
4	A11-700009	Motor Pulley M2 50HZ	1
	A20-210006	Motor Pulley M2(Single Phase) 50HZ	1
	A20-210003	Motor Pulley M2(Single Phase) 60HZ	1
	A93-210003	Motor Pulley M2 60HZ	1
	A93N-200002-0	Motor Pulley (50HZ) M2/3Ph (30 Strapping /minute)	1
	A93N-200003-0	Motor Pulley (50HZ) M2/1Ph (30 Strapping /minute)	1
5	A11-700007	Motor Pulley (50Hz) M1	1
	A20-210001	Motor Pulley (60Hz) M1	1
	A93N-200006-0	Motor Pulley (60Hz) M1 (30Strapping /minute) 1:37	1
6	A20-210021	Motor Base	1
8	E17-010079	Heater Transformer 225V/1.1V,45A	1
9	A93N-210001-2	Transformer Box	1
12	E09-010008	Foot Switch Consent	1
13	E07-100001	Foot Switch	1
	E07-100009	Foot Switch TFS-302J-2-JY	1
14	A20-210016-1	Fan Holder	1
15	E01-040005-1	Fan 8025D2HBPL/DC24V	1
	E01-040014	Fan 80*80*25 50HZ/60HZ	1
17	E07-010043	Main Power Sw.YW1S-2E20P	1
18	E07-010041	Selector Switch (S43) YW1S-33E20P	1
19	E07-020077	Stop Switch (S32) CT-BS4+CT-2BZB	1
20	E07-020062	Push Button Switch (S34)YW1L-M2E10Q4GP-1A	1
21	E07-020061	Push Button YW1B-M1E10YP	1
22	E07-010042	Selector Switch (S35) YW1S-2E10P	1
23	A93N-201100-0	Control Panel (CE)	1
25	E07-090045	Proximity Switch OMRON TLQMC1Z	2
27	E07-040050	Safety Switch	1
28	A93-300002	Switch Cam	1
29	A93-300004	Mounting Plate	1
36	E07-050046	Power Lamp YW1P-2EQ7WP	1
41	A93-210002	Roller Holder	1
42	A93-210004	Fixed Shaft	1
43	A93-210005-1	Limit Switch Holder	1
44	A93-210006	Induction Shaft	1
45	A93-210007	Roller	1
46	A93-210013	Fixed Plate	1
47	G01-081008	Metal Bush,MB0808	2

No.	Part No.	Part Name	Q'Ty
48	E07-040047	Limit Switch Z15G1704	1
49	A20-210027	Limit Switch Cover C-B-2	1
50	E07-020060	Push Button Switch YW1B-M1E10 BP-1A	1
52	SK32956-1	Knob RN-110EH	1
53	E13-020011	Variable Resister 1RV24YM20S/1K	1
54	A93N-202002-0	Control Panel (Elec. Outside Tension)	1
	E25-101072	PC Board (Elec. Outside Tension)	1
55	E07-010057	Main Power Switch ZH-HD-1	1
56	A93N-202100-1	Control Panel (Elec. Outside Tension)	1
57	A20-110018-0	Proximity Switch Bracket	1

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Control box

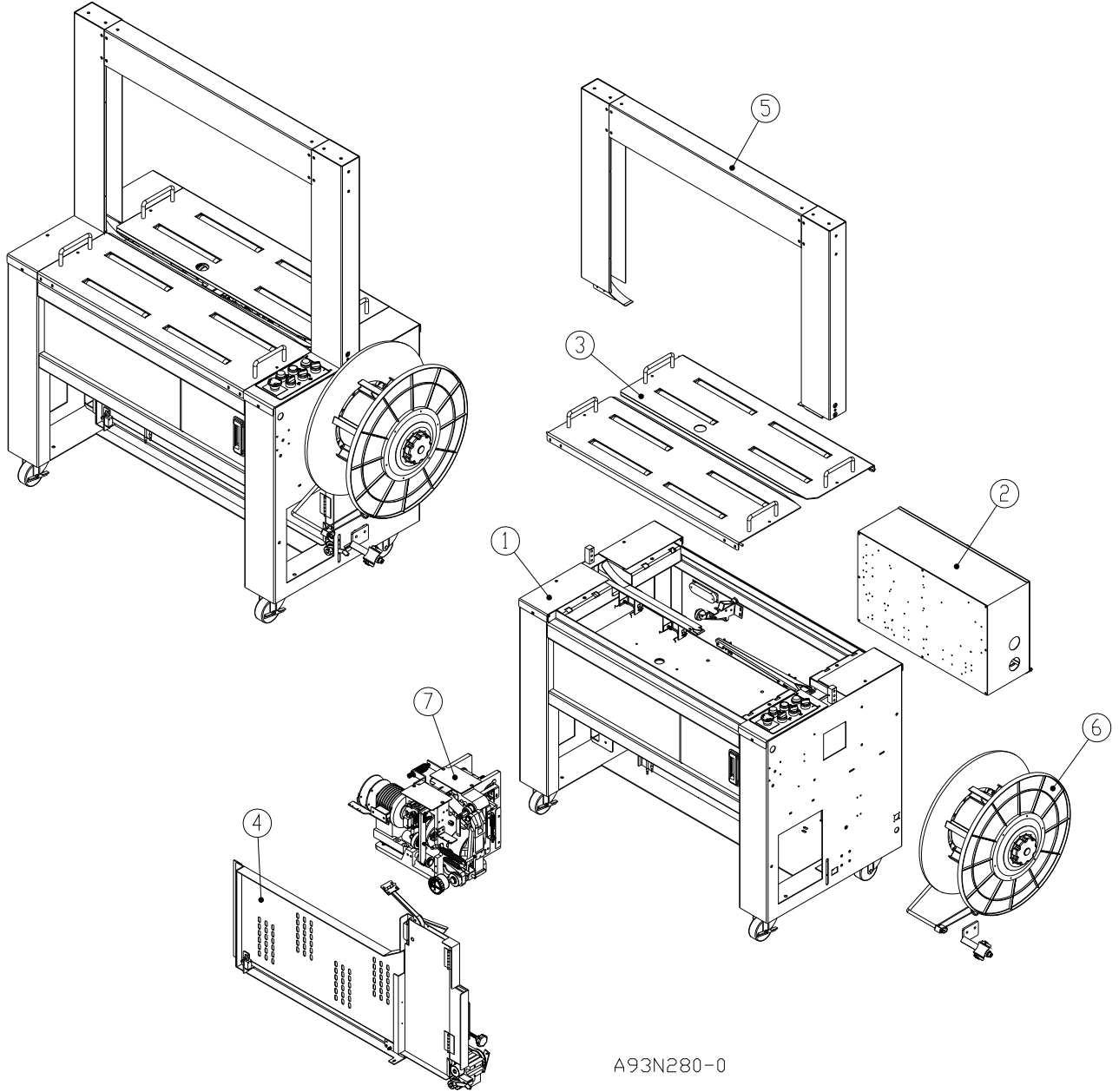


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Control box

No.	Part No.	Part Name	Q'Ty
1	E03-010026R1	Magnetic Switch AC24V CU-11(AC24V)	4
2	E25-101043	PCB (Input)(Auto-Load)/A1	1
	E25-101044-1	PCB (Output)(Auto-Load)/A2	1
	E25-101046-1	Main PCB (Standard)/A1	1
3	E23-030069	Overload Relay RHU-10K1 (3.5-4.8A)(220V/1Ph)	1
	E23-030067	Overload Relay RHU-10K1 (1.4-2.0A)(380V)	1
	E23-030071	Overload Relay RHU-10K1 (5.5-8.5A)(110V)	1
	E23-030068	Overload Relay RHU-10K1 (7.2-1.0A)(220V/3Ph)	1
4	E23-030068	Overload Relay RHU-10K1 (2.3-3.2A)(220V/1Ph)	2
	E23-030065	Overload Relay RHU-10K1 (0.75-1.0A)(380V)	2
	E23-030070	Overload Relay RHU-10K1 (4.5-6.3A)(110V)	2
	E23-030066	Overload Relay RHU-10K1 (1.1-1.6A) (220V/3Ph)	2
6-1	E23-010021	Fuse(F1 ~ F3) 5×20 5A(380V)	3
	E23-010022	Fuse(F1 ~ F3) 5×20 8A(220V/3Ph)	3
	E23-010025	Fuse(F1 ~ F2) 5×20 15A(220V/1Ph)	2
	E23-010032	Fuse(F1 ~ F2) 5×20 20A(110V)	2
	E23-010009	Fuse(F7) 5×20 2A(Slow Blow)	1
8	E17-010052	Transformer 230V//24V,2A	1
9	A93N-220050-0	Control Box	1
10	A93N-220150-0	Box Cover	1
11	A93N-220001-1	Panel	1
12	A20-220004	Label Sticker 5cm	1
13	S13-300009	Knob	1
16	E25-101045	PCB (Terminal) (Auto-Load)/A3	1
	E25-101047	PCB (Standard)/A3	1
16-1	E23-010007	Fuse(F4) 5*20 2A (220V)	1
	E23-010024	Fuser(F4) 5*20 3A (110V)	1
16-2	E23-010007	Fuse (F5) 5*20 2A	1
16-3	E23-010011	Fuse (F6) 5*20 (Slow Blow)	1
17	E25-101280	Power Supplier LRS-100F-24	1
	E25-101281	Power Supplier LRS-50-24(Standard)	1

General unit

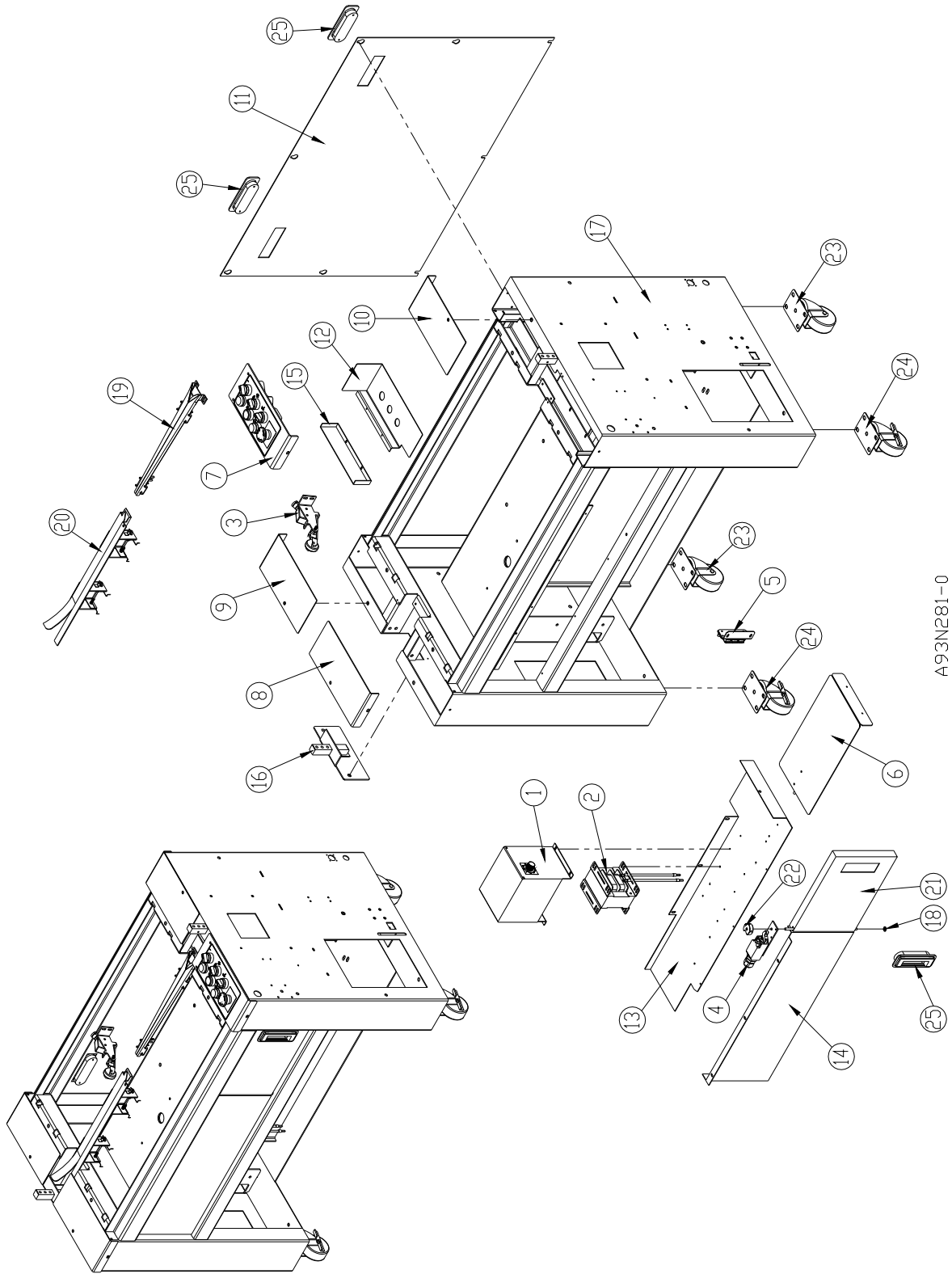


7.4

General unit

No.	Part No.	Part Name	Q'Ty
1	CA93N-300011-0	Body Unit	1
2	A93N-220000-0	Control Box Unit	1
3	A93N-300000-0	Table Roller Unit	1
4	A93N-580000-0	Pool Unit (Standard)	1
5	A93N-410000-0	Arch Unit (850Wx600H)	1
6	A20-670000-120	Reel Unit 200mm	1
7	A20-100000-0	Control Unit	1

Body unit



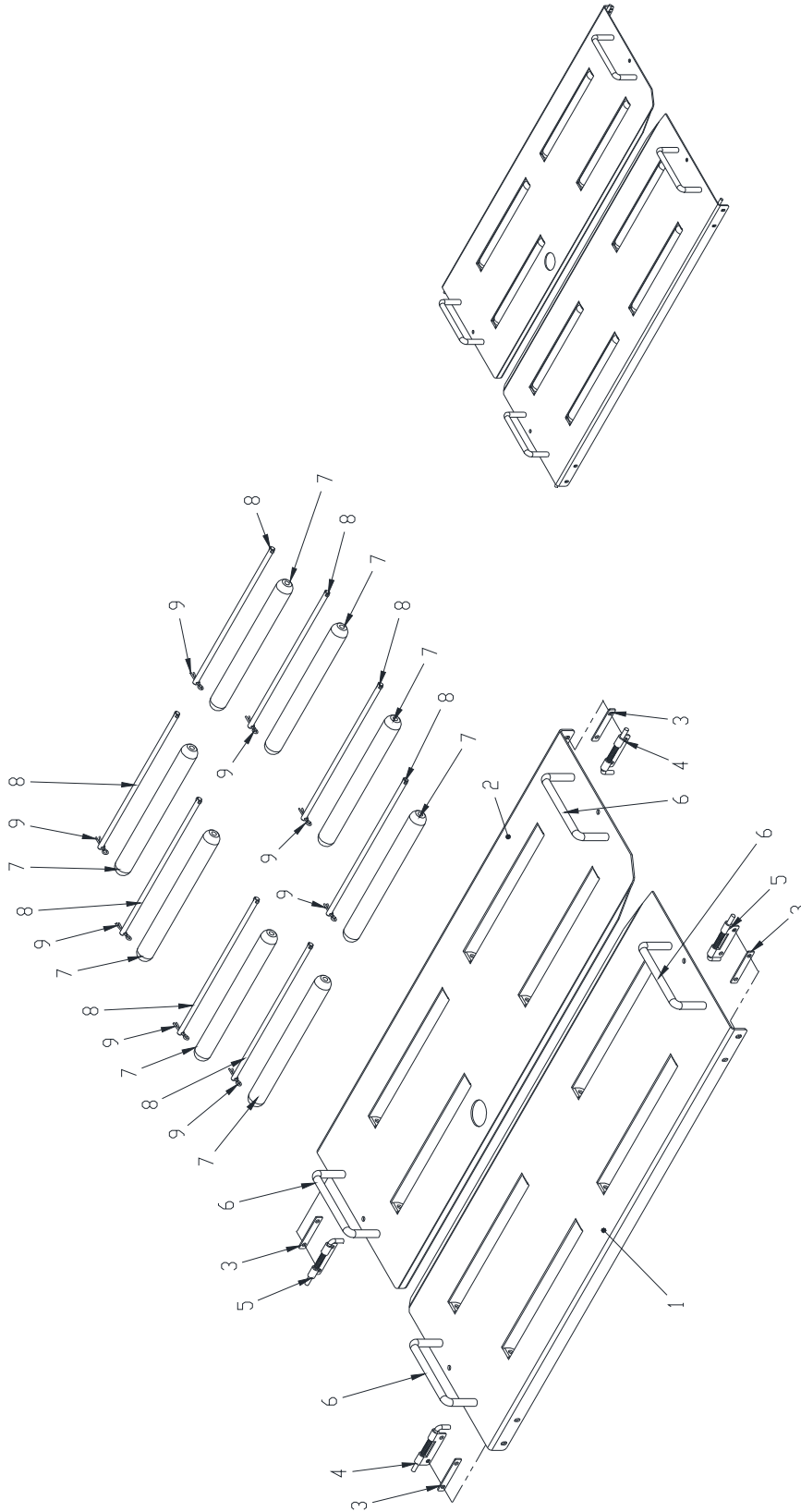
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Body unit

No.	Part No.	Part Name	Q'Ty
1	BA21001	Temperature Control Transformer Cover Unit	1
2	BA21002-02	Temperature Control Transformer Unit	1
3	BA24001	Ball Switch Base Unit	1
4	BA24003	Safety Switch Unit	1
5	BA33001	Magnet Catch Holder	1
6	BA34001	Front Bottom Panel (R)	1
7	A93N-201100-0	Control Panel	1
8	A93N-300001-1	Front Upper Cover (L)	1
9	A93N-300002 -1	Rear Upper Cover (L)	1
10	A93N-300003 -1	Rear Upper Cover (R)	1
11	A93N-300004 -1	Rear Panel	1
11	A93-300004-1	Mounting Plate	1
12	A93N-300010-1	Panel (Down)	1
13	A93N-300012-3	Front Bottom Panel	1
14	A93N-300016-0	Left Door	1
15	A93N-300017-0	Cover (L)	1
16	A93N-300150-1	Arch Support (L)	1
17	A93N-310450-4	Frame	1
18	A20-300015	Nylon Washer	1
19	A20-411000-DHA	RH Bandway(850W)	1
20	A20-412000-ACA	LH Bandway(850W)	1
21	A77-321150-0	Right Door	1
22	A93-300002	Switch Cam	2
23	A93-900004	Caster	2
24	A93-900005	Lockable Castor	3
25	S35-300027	Edge Guard	3

Table Roller unit



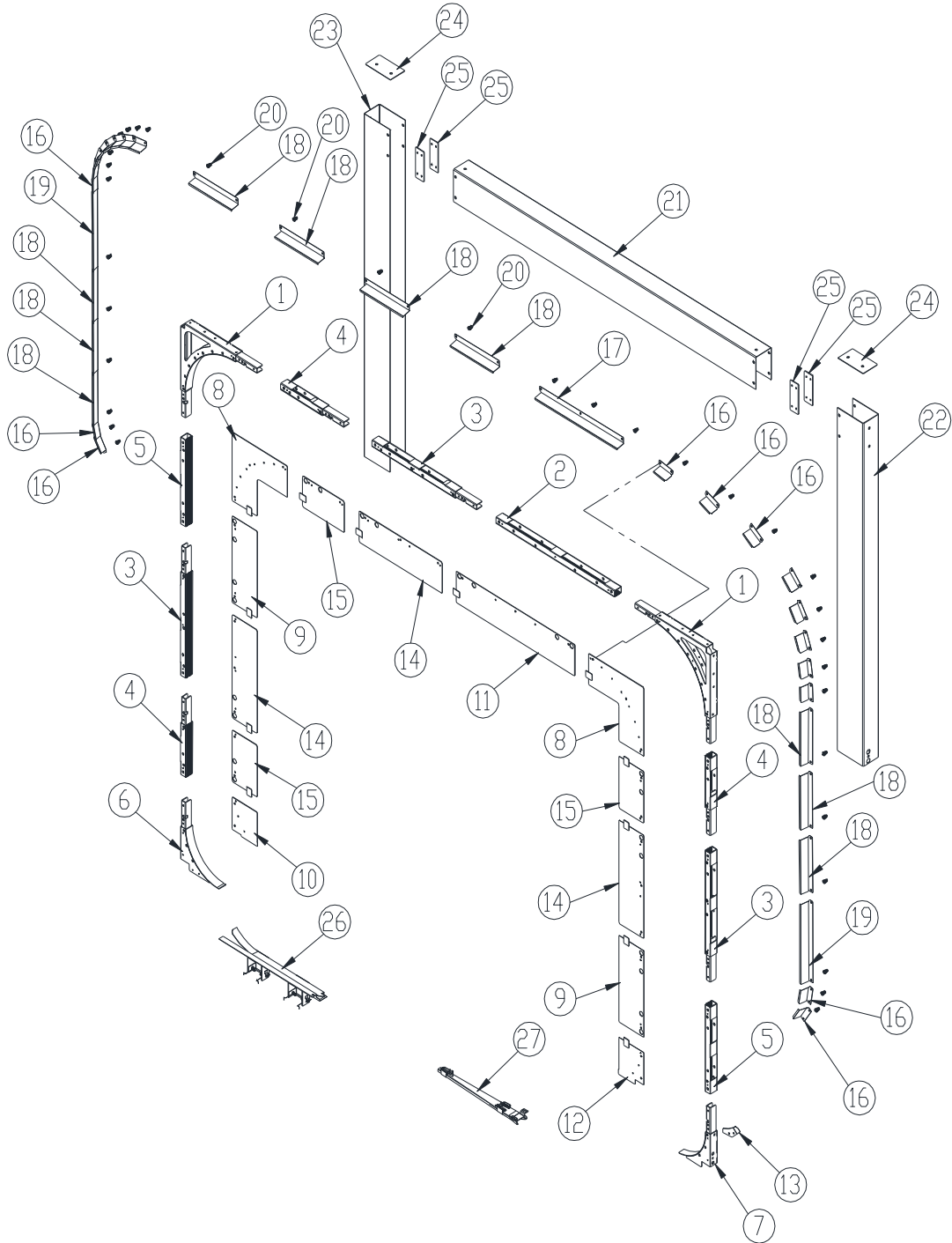
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Table Roller unit

No.	Part No.	Part Name	Q'Ty
1	A98-331050-0	Upper Table Front (850W)	1
2	A93N-300006-0	Upper Table Rear (850W)	1
3	A93N-300007-0	Spring Hinge Pad	4
4	A77-300005-0	Spring Hinge (R)	2
5	A77-300006-0	Spring Hinge (L)	2
6	A20-320005	Handle	4
7	A20-321001	Table Roller	8
8	A20-321002	Table Roller Shaft	8
9	W31-210000	Pin R10	8

Band way unit



A93N-109-0

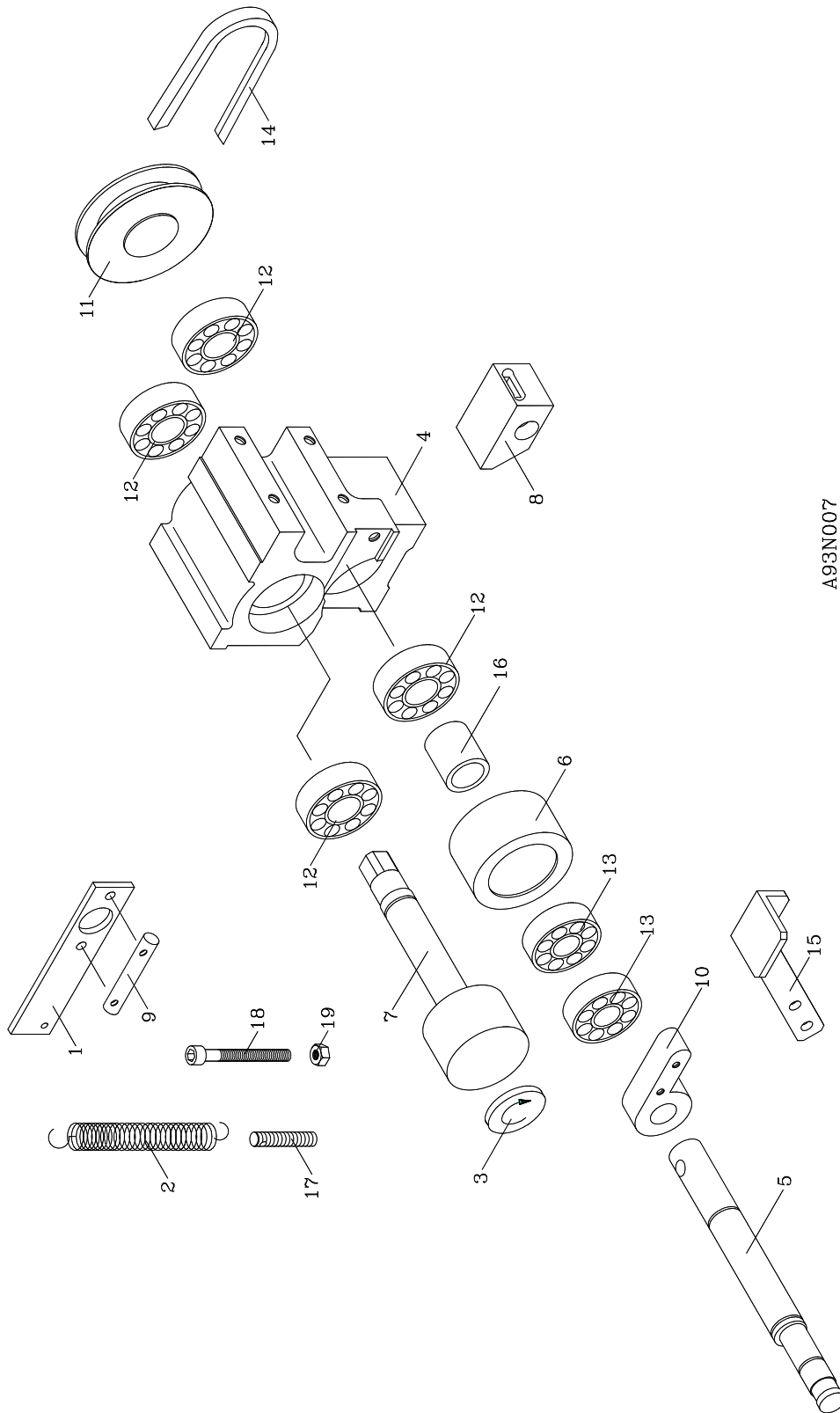
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Band way unit

No.	Part No.	Part Name	Q'Ty
1	A93-411150-0	Corner Unit (Upper)	2
2	A88-451050-0	Bandway Upper (650W)	1
	A93-411450-0	Bandway Upper (850W)	1
3	A93-400001050-0	Bandway (Extension 400W)	3
4	A93-400001150-0	Bandway (Extension 200W)	3
5	A93-411050-0	Bandway (L,R)(600H)	2
6	A93-411250-0	Corner Unit (Left Lower)	1
7	A93-411350-0	Corner Unit (Right Lower)	1
8	A93-412050-0	Front Corner Guide Plate (Upper)	2
9	A93-412250-0	Guide Plate (L,R) (Extension 600W)	2
10	A93-412001-0	Lower Guide Plate (L)	1
11	A93-401002050-0	Guide Plate (Upper)(650W)	1
	A93-412150-0	Guide Plate (Upper)(850W)	1
12	A93-412350-0	Lower Guide Plate (R)	1
13	A93-412002-0	Protect Plate	1
14	A93-400002050-0	Guide Plate (Upper) (Extension 400W)	3
15	A93-400002150-0	Guide Plate(Extension)	3
16	A93-413001-0	Corner Flap	20
17	A93-413002-0	Upper Flap	1
18	A93-413003-0	Flap (Extension)	3
19	A93-413004-0	Side Flap(L,R)	2
20	A88-443004-1	Spring	36
21	A93-414001-0ABA	Arch Cover (Upper)(650W)	1
	A93-414001-0ACA	Arch Cover (Upper)(850W)	1
	A93-414001-0ADA	Arch Cover (Upper)(1050W)	1
	A93-414001-0AEA	Arch Cover (Upper)(1250W)	1
	A93-414001-0AFA	Arch Cover (Upper)(1450W)	1
	A93-414001-0AGA	Arch cover (Upper)(1650W)	1
22	A93-414002-0AAC	Arch Cover (R) (600H)	1
	A93-414002-0AAD	Arch Cover (R) (800H)	1
	A93-414002-0AAE	Arch Cover (R) (1000H)	1
	A93-414002-0AAF	Arch Cover (R) (1200H)	1
23	A93-414003-0AAC	Arch Cover (L) (600H)	1
	A93-414003-0AAD	Arch Cover (L) (800H)	1
	A93-414003-0AAE	Arch Cover (L) (1000H)	1
	A93-414003-0AAF	Arch Cover (L) (1200H)	1
24	A93-414004-0	Plate (Upper)	2
25	A93N-401008-0	Joint Plate	4
26	A20-412000ABA	LH Bandway Assembly (650W)	1
	A20-412000ACA	LH Bandway Assembly (850W)	1
27	A20-411000-CBA	RH Bandway Assembly (650W)(9mm)	1
	A20-411000-CHA	RH Bandway Assembly (850W) (9mm)	1
	A20-411000-DBA	RH Bandway Assembly (650W) (12mm)	1

No.	Part No.	Part Name	Q'Ty
	A20-411000-DHA	RH Bandway Assembly (850W) (12mm)	1
	A20-411000-EBA	RH Bandway Assembly (650W) (15mm)	1
	A20-411000-EHA	RH Bandway Assembly (850W) (15mm)	1

Pool unit



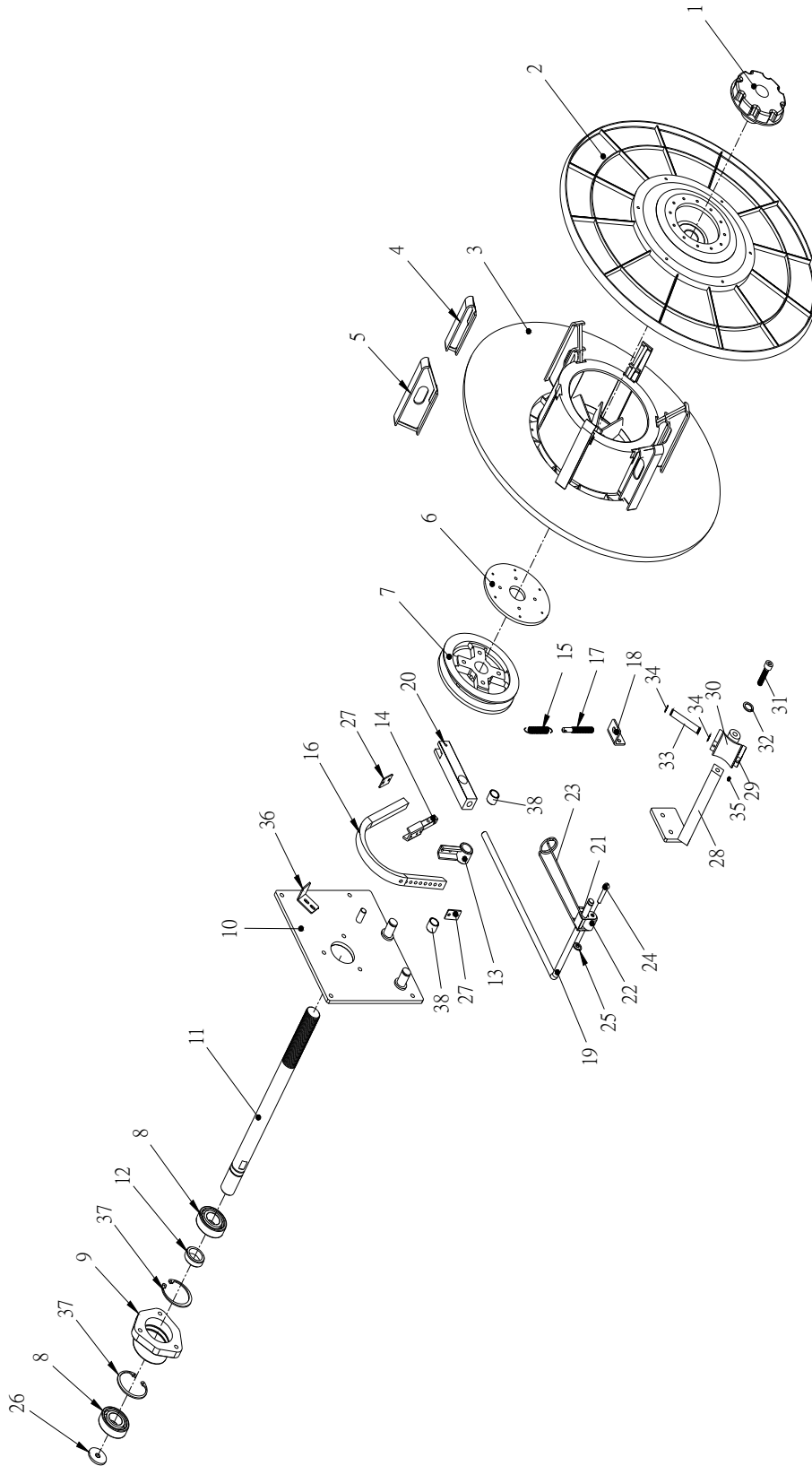
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Pool unit

No.	Part No.	Part Name	Q'Ty
1	A93N-500003-0	Lever	1
2	A20-510006	Pool Tension Spring	1
3	A20-510007	Label (Direction)	1
4	A20-511001	Pool Bearing Case	1
5	A20-511002	Pool Lower Shaft	1
6	A20-511003	Pool Lower Roller	1
	A20-511016-0	Pool Lower Roller (Cr)	1
7	A20-511004	Pool Main Roller & Shaft	1
	A20-511017-0	Pool Main Roller & Shaft (Cr)	1
8	A20-511006CAA	Pool Feed Shooter (9mm)	1
	A20-511006DAA	Pool Feed Shooter (12mm)	1
	A20-511006EAA	Pool Feed Shooter (15mm)	1
	A20-511006HAA	Pool Feed Shooter (6mm)	1
9	A93N-500004-0	Pin	1
10	A70U-501010-0	Knob	1
11	A20-171006	Feed Roller Pulley M3	1
12	G04-216202	Ball Bearing, 6202ZZ	4
13	G04-216201	Ball Bearing, 6201ZZ	2
14	G16-010019-1	V-Belt,M-19	1
15	A93N-500005-1	Lever	1
16	A20-511013-0	Bearing Collar	1
17	A93N-500006-0	Pool Spring Adjuster	1
18	W01-210540	Soc hd Cap Screw M5×40L	1
19	W15-110500	Hex.Nut HN M5	1

Reel unit



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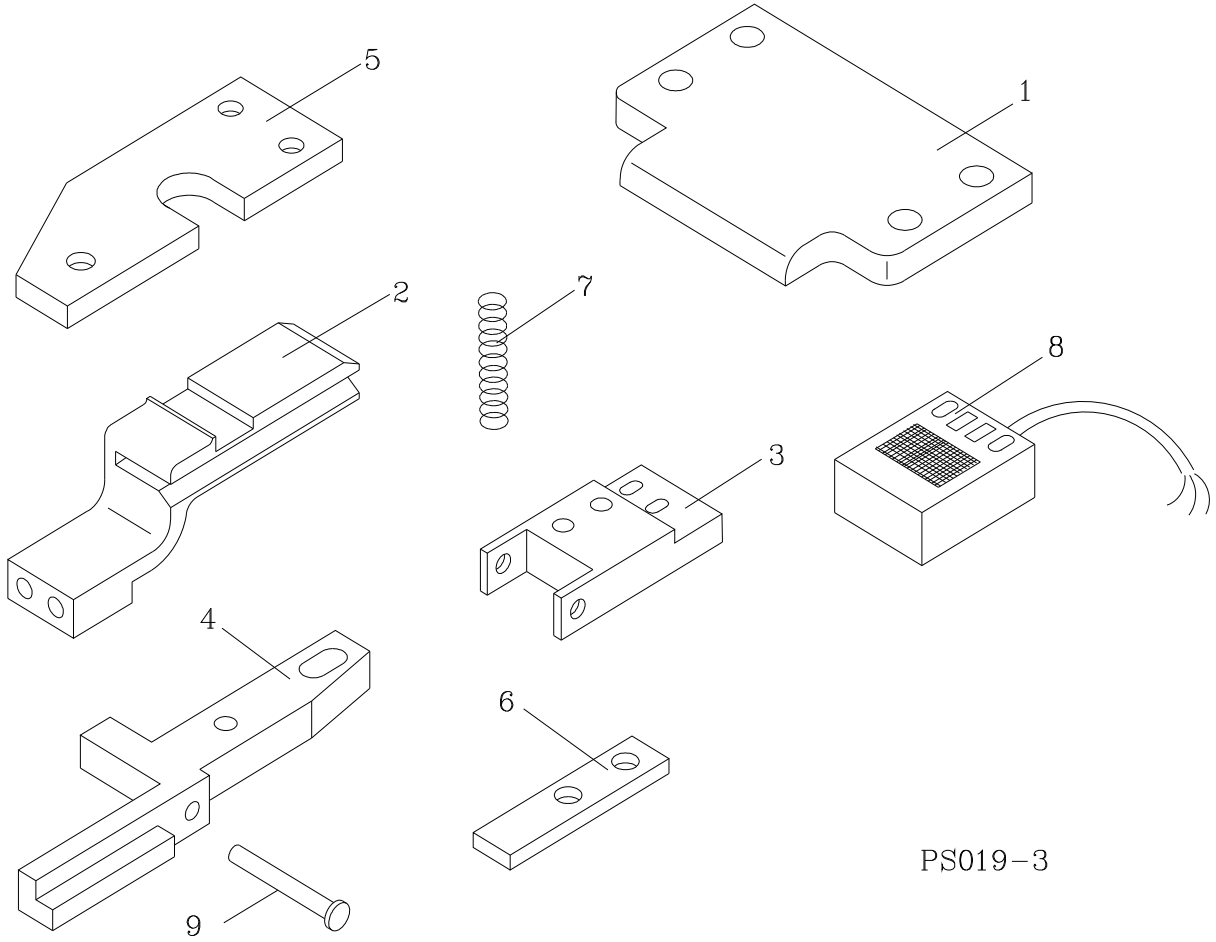
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Reel unit

No.	Part No.	Part Name	Q'Ty
1	S13-450001	Reel Nut Handle (R)	1
2	S23-430003-120	Reel Out Circular	1
3	S13-451050-120	Reel In Circular	1
4	S13-450003	Reel Holder ϕ 230mm	6
5	S13-450002	Reel Holder ϕ 280mm	6
6	A20-620011	Plate	1
7	A20-620010	Reel Brake Pulley	1
8	G04-216205	Ball Bearing , 6205ZZ	2
9	A20-670001-0	Bearing Housing	1
10	A20-670050-0	Reel unit Base	1
11	A20-670002-0	Reel Shaft	1
	A20-670015-0	Reel Shaft (200x200)	1
12	H70-100019	Collar	1
13	A20-621150	Brake Belt Holder	1
14	A20-670150-1	Brake Belt Holder	1
15	XEX689	Spring	1
16	A20-670013-0	Brake B-Belt	1
17	A20-130002	Cutter Tension Spring Hook	1
18	A20-670004-1	Spring Hook	1
19	A93N-600006-0	Arm	1
20	A20-670006-0	Brake Tension Holder	1
21	A20-670007-0	Roller Holder	1
22	A20-622002	Roller	1
23	A20-620016-1	Band Regulator	1
24	W23-206030	Pin	1
25	W19-150306	Serrated Washer	1
26	S14-420005	Washer	1
27	A20-621002	Belt Holder Plate	2
28	A20-611150-1	Bracket Holder	1
29	A20-611250-0	Roller Bracket	1
30	A93N-600003-1	Roller	1
31	W01-210840-1	Soc hd Cap Screw M8x40L	1
32	W19-020108	Spring washer M8	1
33	S14-424003	Roller Shaft	1
34	W33-020100	Stop Ring	2
35	W02-210406	Set Screw M4x6L	1
36	A20-670014-0	Reel Guard	1

No.	Part No.	Part Name	Q'Ty
37	W33-010520	C Type Stop Ring	2
38	G01-151720	Metal Bush	2

Short feeding system with alarm



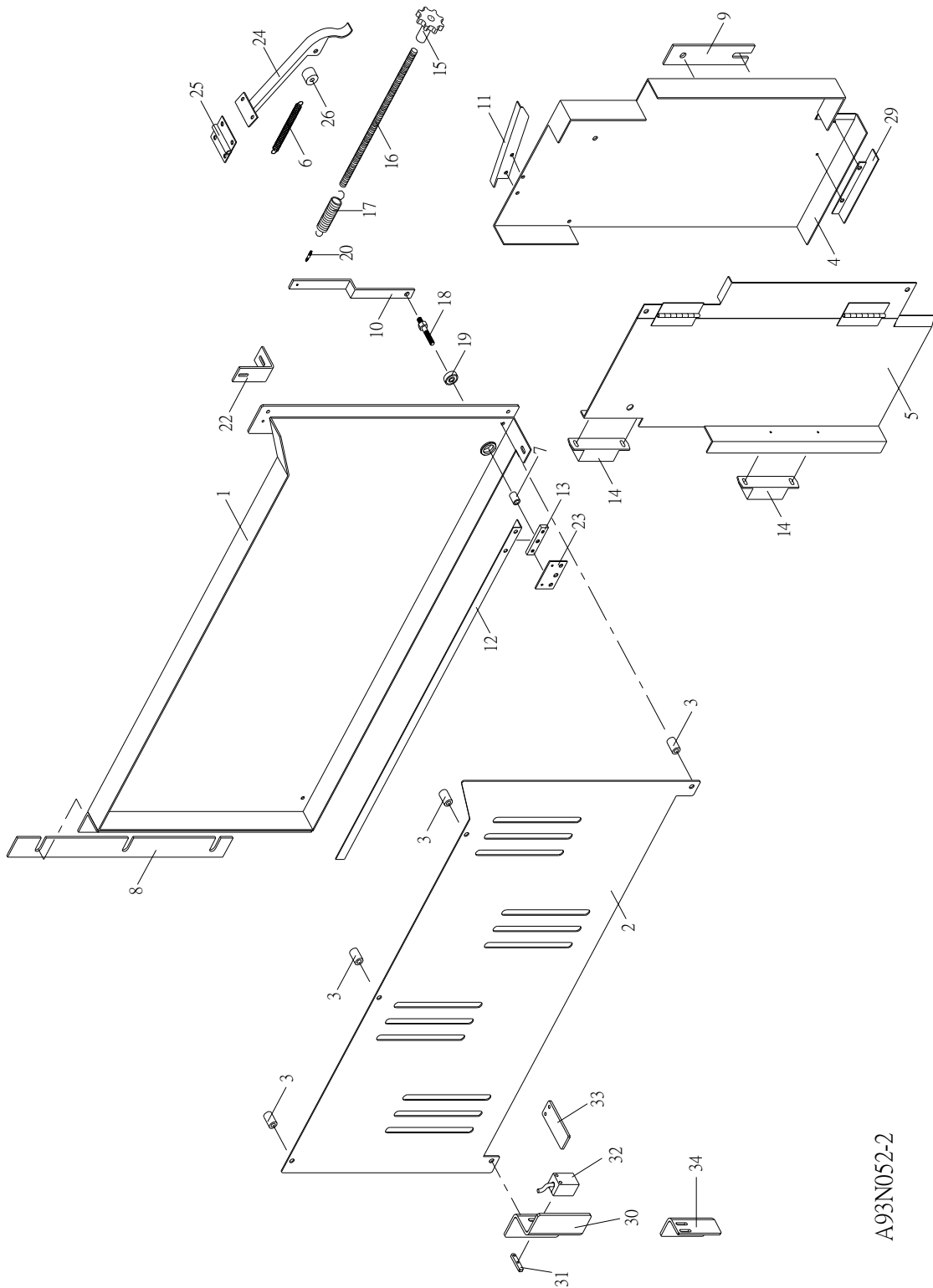
PS019-3

7.10

Short feeding system with alarm

No.	Part No.	Part Name	Q'Ty
1	A20-120021-2IAA	Slide Table (Upper) (15.5mm)	1
	A20-120021-2AAA	Slide Table (Upper) (12mm)	1
	A20-120021-2GAA	Slide Table (Upper) (9mm)	1
2	A20-120007AAA	Slide Table (Lower)	1
3	A20-230001-1	Proximity Switch Base	1
4	A20-230002-3	Activating Plate for Proximity Switch	1
5	A20-230003	Side Plate for Proximity Switch	1
6	A20-230004	Bracket	1
7	A20-230005-1	Compression Spring	1
8	E07-090027	Proximity Switch TLQ5MC2-Z 12V TO 24VDC	1
9	A20-230006	Pin ϕ 3×24	1

Pool unit (Standard)



A93N052-2

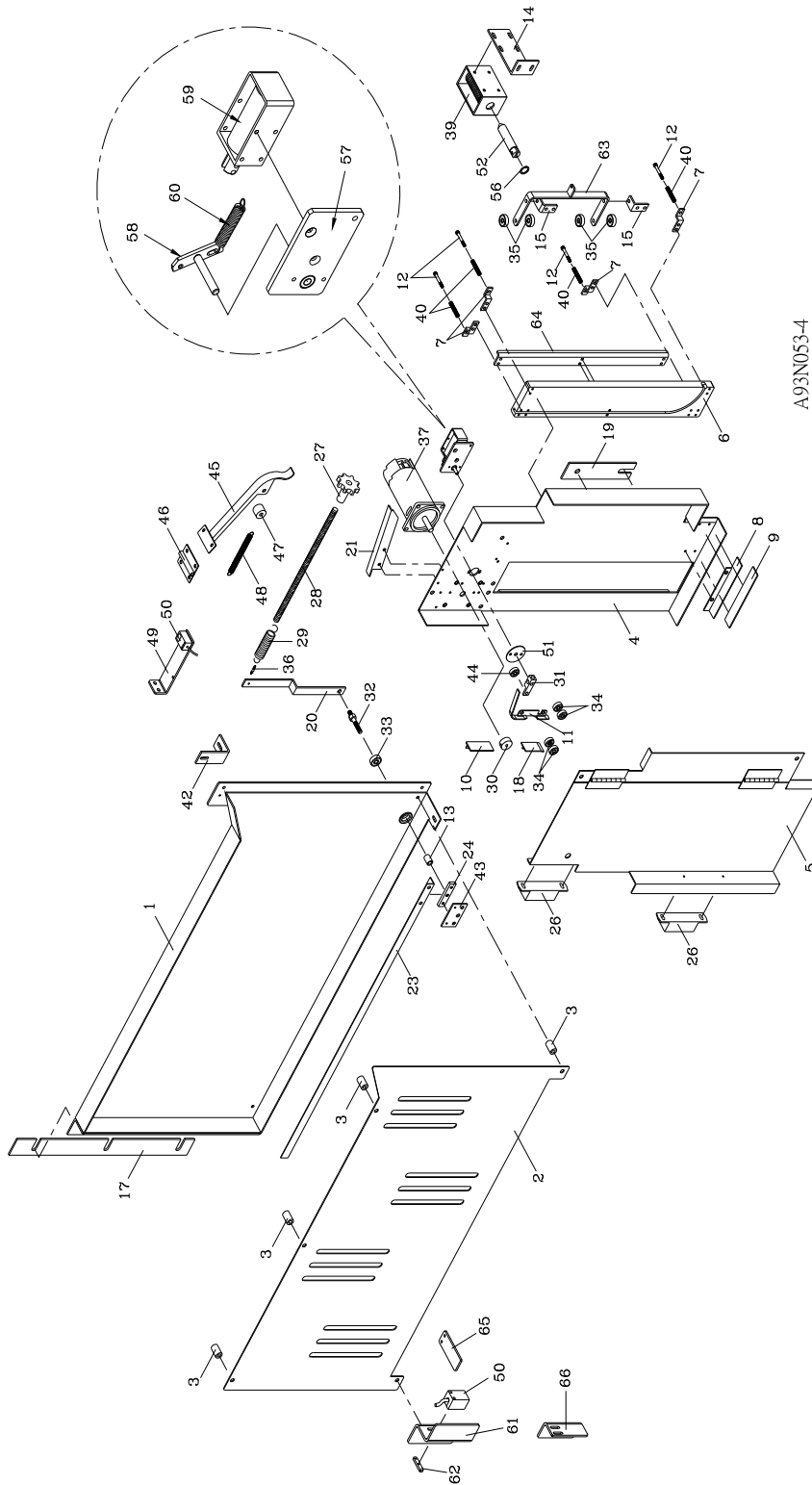
7.11

Pool unit (Standard)

No.	Part No.	Part Name	Q'Ty
1	A20-531050-2	Pool Box Rear, LH (850/1250W)	1
	A93N-500150-1	Pool Box Rear, LH (1450W UP)	1
2	A20-531001-1	Pool Box Front, LH (850/1250W)	1
	A93N-500001-1	Pool Box Front, LH (1450W UP)	1
3	A77-500010-0-CAA	Collar (9mm)	7
	A77-500010-0-DAA	Collar (12mm)	7
	A77-500010-0-EAA	Collar (15mm)	7
4	A93N-500050-1	Pool Box Rear,RH	1
5	A77-500350-1	Pool Box Front,RH	1
6	A20-240010	Spring	1
7	A77-500010-0-CAA	Collar (9mm)	1
	A77-500010-0-DAA	Collar (12mm)	1
	A77-500010-0-EAA	Collar (15mm)	1
8	A77-500014-1-CAA	Band Adjustment Plate (9mm)	1
	A77-500014-1-DAA	Band Adjustment Plate (12mm)	1
	A77-500014-1-HAA	Band Adjustment Plate (6mm)	1
9	A77-500016-0-CAA	Band Adjustment Plate (9mm)	1
	A77-500016-0-DAA	Band Adjustment Plate (12mm)	1
	A77-500016-0-HAA	Band Adjustment Plate (6mm)	1
10	A77-500017-0	Balance Bar Adjustment Plate	1
11	A77-500018-0	Tension Arm Shooter Guide Rail	1
12	A93N-500011-0	Balance Bar (850/1250W)	1
	A93N-500012-0	Balance Bar (1450W)	1
13	A70U-501002	Balance Bar Fixed Plate	1
14	A20-300006	Magnet Catch	2
15	A70U-602408	Star grip 602-KT-40-M8	1
16	A70U-501005-1	Pool Adjuster Pin	1
17	A20-511018-0	Pool Balance Spring	1
18	A70U-501003-1	Shaft	1
19	G04-210626	Ball Bearing, 626ZZ	1
20	G22-000001	Twist Stopper	1
22	A77-500022-0	Fixed Plate	1
23	A77-500021-0	Plate	1
24	A77-500450-1-CAA	Tension Arm Shooter (9mm)	1
	A77-500450-1-DAA	Tension Arm Shooter (12mm)	1
	A77-500450-1-EAA	Tension Arm Shooter (15mm)	1
25	A77-500023-0	Hinge	1

No.	Part No.	Part Name	Q'Ty
26	A77-500024-1-CAA	Tension Arm Shooter Roller (9mm)	1
	A77-500024-1-DAA	Tension Arm Shooter Roller (12mm)	1
	A77-500024-1-EAA	Tension Arm Shooter Roller (15mm)	1
29	A20-531004-0CAA	Inlet Guide Plate (Upper) (9mm)	1
	A20-531004-0DAA	Inlet Guide Plate (Upper) (12mm)	1
	A20-531004-0EAA	Inlet Guide Plate (Upper) (15mm)	1
30	A93N-500014-0	Limit Plate	1
31	A20-230004	Bracket	1
32	E07-090027	Proximity Switch OMRON TLQ5MC2-Z 12V TO 24VDC	1
33	A85-510008-0	Sensor Plate	1
34	A85-510006-0	Proximity Switch Bracket	1

Pool Unit(Auto Load)



7.12

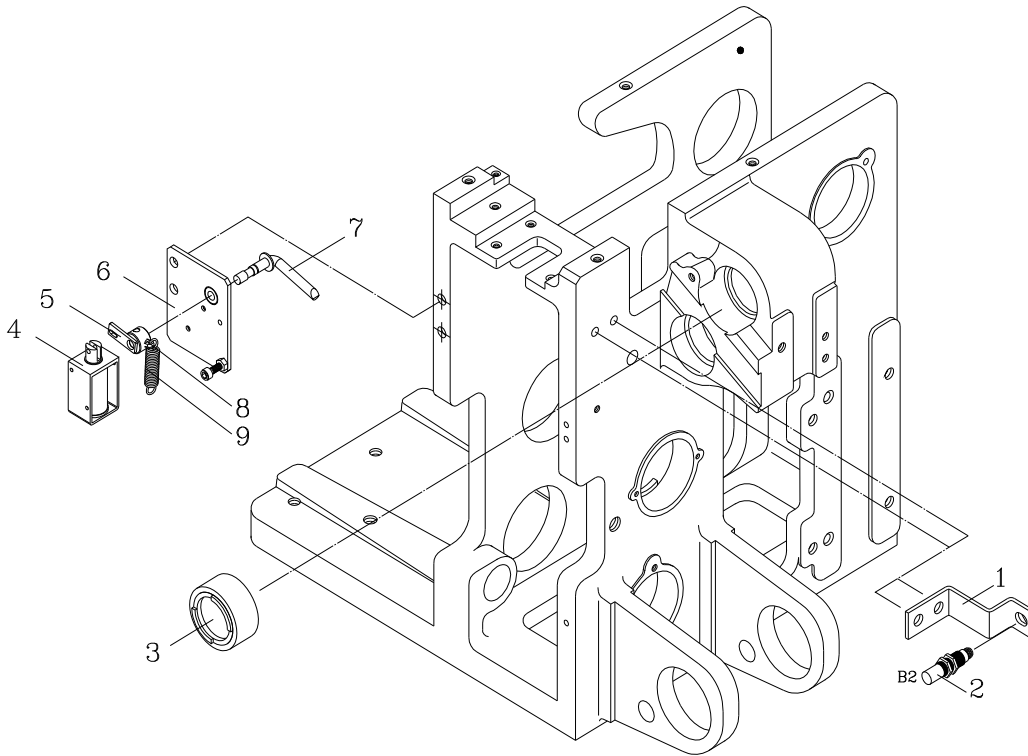
Pool Unit(Auto Load)

No.	Part No.	Part Name	Q'Ty
1	A20-531050-2	Pool Box Rear, LH(850W/1250W)	1
	A93N-500150-1	Pool Box Rear, LH(1450W UP)	1
2	A20-531001-1	Pool Box Front ,LH (850W/1250W)	1
	A93N-500001-1	Pool Box Front ,LH (1450W UP)	1
3	A77-500010-0CAA	Collar (9mm) 850W/1250W	5
	A77-500010-0CAA	Collar (9mm) 1450W UP	7
	A77-500010-0DAA	Collar (12mm) 850W/1250W	5
	A77-500010-0DAA	Collar (12mm) 1450W UP	7
	A77-500010-0EAA	Collar (15mm) 850W/1250W	5
	A77-500010-0EAA	Collar (15mm) 1450W UP	7
4	A77-500250-3	Pool Box Rear , RH	1
5	A77-500350-1	Pool Box Front, RH	1
6	A77-500003-0CAA	Activity Rail (9mm)	1
	A77-500003-0DAA	Activity Rail (12mm)	1
	A77-500003-0EAA	Activity Rail (15mm)	1
7	A77-500004-0CAA	Activity Rail Holder (9mm)	4
	A77-500004-0DAA	Activity Rail Holder (12mm)	4
	A77-500004-0EAA	Activity Rail Holder (15mm)	4
8	A20-531004-0CAA	Inlet Guide Plate (Upper) (9mm)	1
	A20-531004-0DAA	Inlet Guide Plate (Upper) (12mm)	1
	A20-531004-0EAA	Inlet Guide Plate (Upper) (15mm)	1
9	A20-531005-1CAA	Inlet Guide Plate (Lower) (9mm)	1
	A20-531005-1DAA	Inlet Guide Plate (Lower) (12mm)	1
	A20-531005-1EAA	Inlet Guide Plate (Lower) (15mm)	1
10	A77-500007-2CAA	Outlet Left Guide Plate (Upper) (9mm)	1
	A77-500007-2DAA	Outlet Left Guide Plate (Upper) (12mm)	1
	A77-500007-2EAA	Outlet Left Guide Plate (Upper) (15mm)	1
11	A77-500008-3CAA	Outlet Right Guide Plate (9mm)	1
	A77-500008-3DAA	Outlet Right Guide Plate (12mm)	1
	A77-500008-3EAA	Outlet Right Guide Plate (15mm)	1
12	A77-500009-0	Spring Screw	4
13	A77-500010-0CAA	Collar (9mm)	1
	A77-500010-0DAA	Collar (12mm)	1
	A77-500010-0EAA	Collar (15mm)	1
14	A77-500011-1	Solenoid Fixed Base	1
15	A77-500012-0	Pull Shaft Fixed Base	2

No.	Part No.	Part Name	Q'Ty
17	A77-500014-1CAA	Band Adjustment Plate (9mm)	1
	A77-500014-1DAA	Band Adjustment Plate (12mm)	1
	A77-500014-1HAA	Band Adjustment Plate (6mm)	1
18	A77-500015-2CAA	Outlet Left Guide Plate (Lower) (9mm)	1
	A77-500015-2DAA	Outlet Left Guide Plate (Lower) (12mm)	1
	A77-500015-2EAA	Outlet Left Guide Plate (Lower) (15mm)	1
19	A77-500016-0CAA	Band Adjustment Plate (9mm)	1
	A77-500016-0DAA	Band Adjustment Plate (12mm)	1
	A77-500016-0EAA	Band Adjustment Plate (15mm)	1
20	A77-500017-0	Balance Bar Adjustment Plate	1
21	A77-500018-0	Tension Arm Shooter Guise Rail	1
23	A93N-500011-0	Balance Bar (850/1250W)	1
	A93N-500012-0	Balance Bar (1450W)	1
24	A70U-501002	Balance Bar Fixed Plate	1
26	A20-300006	Magnet Catch	2
27	A70U-602408	Star Grip 602-KT-40-M8	1
28	A70U-501005-1	Pool Adjuster Pin	1
29	A20-510006	Pool Balance Spring	1
30	A20-240007-3	Roller	1
31	A20-240006-4	Lever	1
32	A70U-501003-1	Shaft	1
33	G04-210626	Ball Bearing , 626ZZ	1
34	G04-210625	Ball Bearing , 625ZZ (9mm)	2
	G04-210625	Ball Bearing , 625ZZ (12mm)	4
	G04-210625	Ball Bearing , 625ZZ (15mm)	4
35	G04-210635	Ball Bearing , 635ZZ	4
36	G22-000001	Twist Stopper	1
37	E01-010101	Dc Motor	1
39	E21-040013-1	Solenoid	1
40	A77-500029-0	Compression Spring	4
42	A77-500022-0	Fixed Plate	1
43	A77-500021-0	Plate	1
44	G04-210634	Ball Bearing ,634ZZ	1
45	A77-500450-1-CAA	Tension Arm Shooter (9mm)	1
	A77-500450-1-DAA	Tension Arm Shooter (12mm)	1
	A77-500450-1-EAA	Tension Arm Shooter (15mm)	1
46	A77-500023-0	Hinge	1

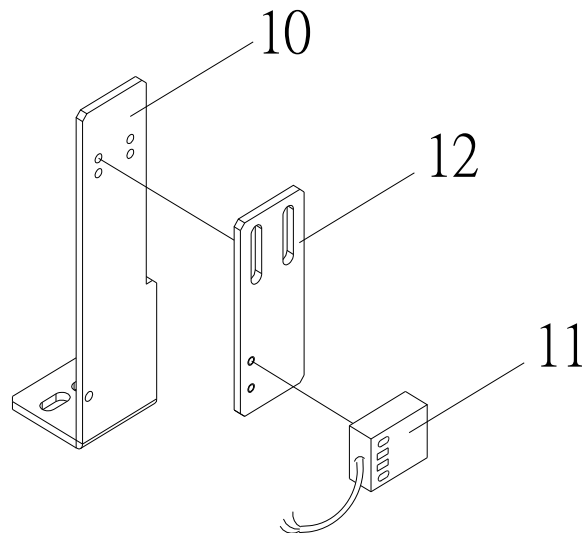
No.	Part No.	Part Name	Q'Ty
47	A77-500024-1-CAA	Roller (9mm)	1
	A77-500024-1-DAA	Roller (12mm)	1
	A77-500024-1-EAA	Roller (15mm)	1
48	A20-240010	Spring	1
49	A12-210006-1	Proximity Switch Base	1
50	E07-090027	Proximity Switch TL-Q5MC2-Z	2
51	A20-240029-0	Solenoid lining Plate	1
52	S13-110009	Solenoid Shaft	1
56	S13-110008	O-Ring	1
57	A20-151050-0	Base	1
58	A20-151150-0	Connect Shaft	1
59	E21-040016	Solenoid	1
60	X2112	Spring	1
61	A93N-500010-0	Limit Plate	1
62	A20-230004	Bracket	1
63	A77-510250-0	Pull Shaft Plate	1
64	A77-500035-0	Activity Rail Fixed Plate	1
65	A85-510008-0	Sensor Plate	1
66	A85-510006-0	Proximity Switch Bracket	1

(1) Looping Ejection



A93N020-2

(2) Empty Strap



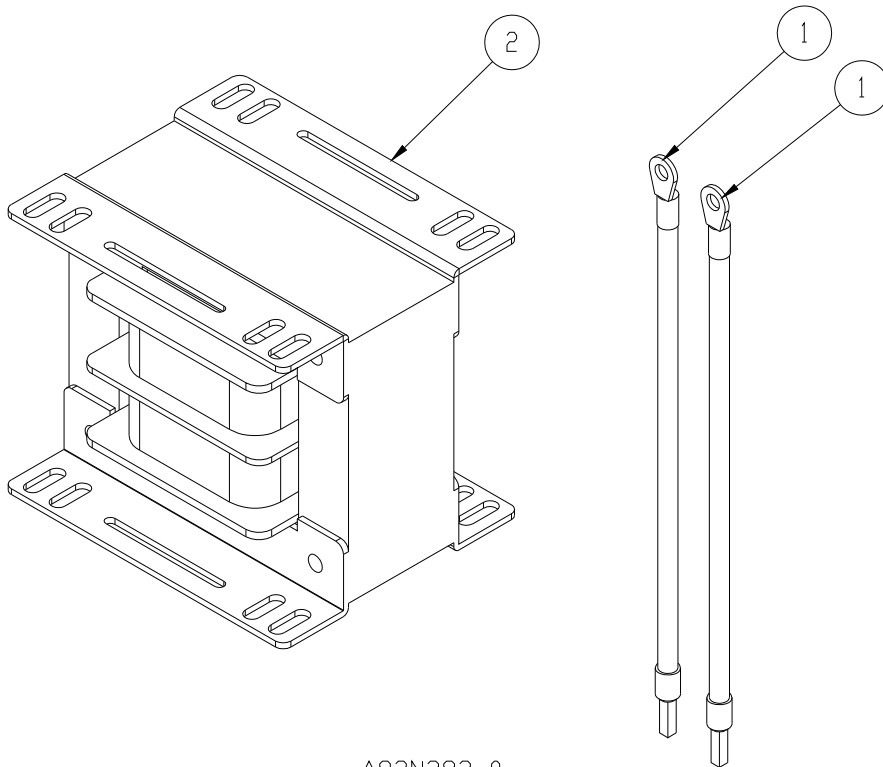
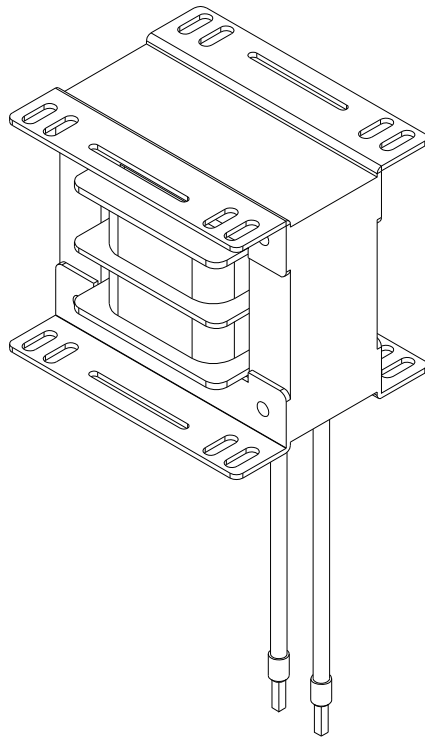
A93N148-0

7.13

Option

No.	Part No.	Part Name	Q'Ty
1	A20-240027	Proximity Switch Bracket	1
2	E07-090074	Proximity Switch OMRON E2E-S05S12-WC-C1	1
3	A20-171102-0CAA	Feed Upper roller (9mm)	1
	A20-171102-0DAA	Feed Upper roller (12mm)	1
	A20-171102-0EAA	Feed Upper roller (15mm)	1
	A20-171102-0FAA	Feed Upper roller (19mm)	1
	A20-171102-0JAA	Feed Upper roller (13.5mm)	1
4	E21-040016	Solenoid	1
5	A20-150250-0	Connect plate	1
6	A20-150150-0	Solenoid Fixed Base	1
7	A20-150010-0	Stopper	1
8	XPP2214	Spring Post	1
9	XOW342	Spring	1
10	A20-511014-0	Proximity Switch Base	1
11	E07-090027	Proximity Switch TLQ5MC2-Z/12V TO 24 VDC	1
12	A20-511015-0	Adjustment Plate	1

Temperature Control Transformer Unit



A93N282-0

7.14

Temperature Control Transformer Unit

No.	Part No.	Part Name	Q'Ty
1	A20-143010-0	Electric Temperature Line	2
2	E17-010075	Temperature Control Transformer 240V/1.4A;60A	2