



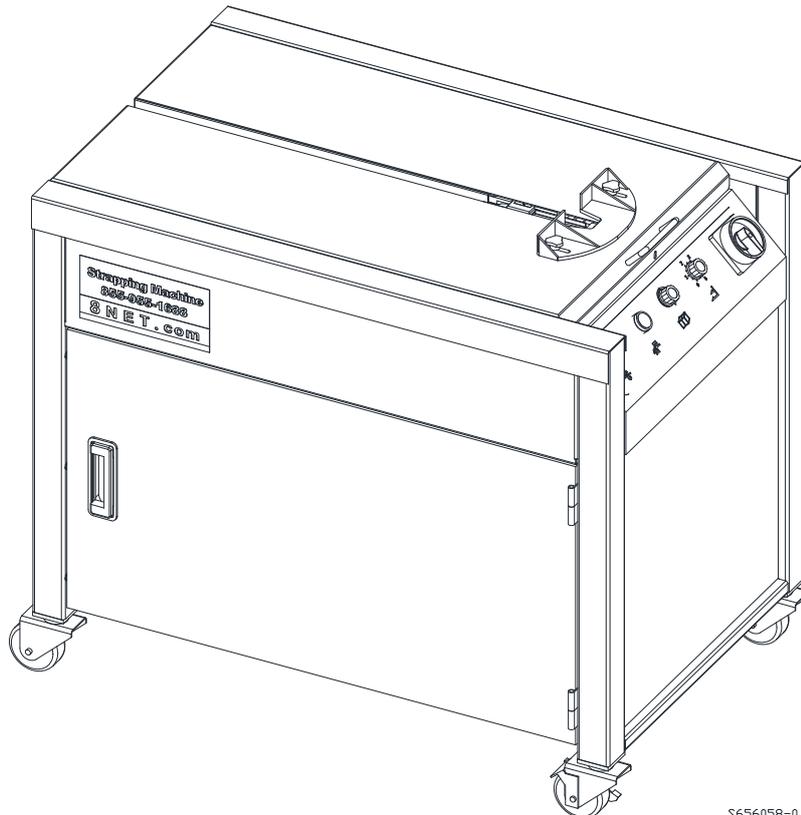
8 NET, Inc.

Installation Guide / Operating Manual

**PSM-SA, Semi-Automatic Strapping
Machine**

S-656

INSTRUCTION MANUAL FOR SEMI-AUTOMATIC STRAPPING MACHINE



S656058-0

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Safety Precautions



ELECTRIC SHOCK

Warning electric shock

- Damager of electric shock.
- In the interior of the cover is electric current.
- Service the machine only after power plug is pulled out.



MECHANISM HAZARDOUS

Warning mechanical hazardous

- Danger of putting finger into sealing mechanism.



HIGH TEMPERATURE

Warning high temperature

- Danger of burning yourself. Do not touch the heater.
- The temperature of heater exceeds 280°C.
- Service only after heater cools down.

Safety Rules:

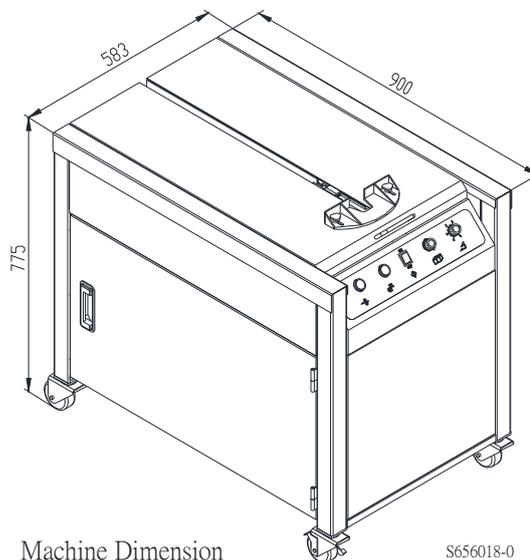
1. It is dangerous for use by untrained personnel.
2. Read the manual carefully before start operating the machine.
3. Observe all warnings and safety procedures.
4. Do not remove or disable features.
5. Do not touch welding 'tongue" (Operating temperature exceeds 280°C)
6. Do not clean or repair machine while it is "on".
7. Turn off the machine when not in use.
8. Never put heavy articles on the power cord that could cause fire or electric shock.
9. Install the machine in level position and fix it sufficiently.
10. In case of fire DO NOT use water.
11. Be sure not to put the finger in the sealing mechanism.
12. When turning the dispenser manually, be careful not to get your finger stuck between the dispenser and machine's body.
13. Do not put finger between slide table and press bar.
14. Smoke of polypropylenes is not toxic, the smoke is well exhausted through the fan beside the heater tongue.

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Technical Data

☞ **Semi-automatic strapping machine**

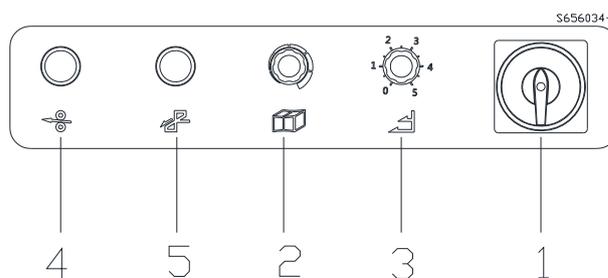
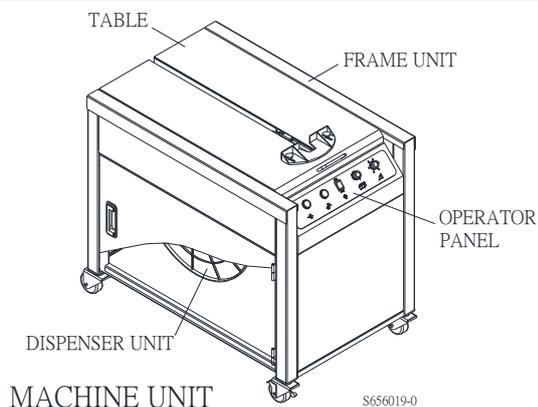
1. Capacity: 2.3 sec/cycle (60HZ) 110V 1/N/PE 60HZ
2. Min. Package size: 50W*25H mm 100V 1/N/PE 50HZ
3. Strap tension: 5-40Kgs
4. Dimension: 900W x 583L x 775H
5. Strapping Material: Polypropylene band
6. Strap width: 5、6、9、12、15.5mm
7. Strap dispenser:
Inside diameter of core: 200mm, 230mm, 280mm
outside diameter of core: 490mm.
8. Weight: approx. 86Kgs
9. Noise emission: 76 db(A) at 50cm distance.
10. Heater: Quick heating within 40sec.
11. Power consumption: 150 Watts
12. Power connection: 230V 1/N/PE 50HZ
13. Options of other power connections:
240V 1/N/PE 50HZ
230V 1/N/PE 50HZ
220V 1/N/PE 50HZ
220V 1/N/PE 60HZ



3

Operating Instructions

☞ **3.1 Introductions of Machine Unit**

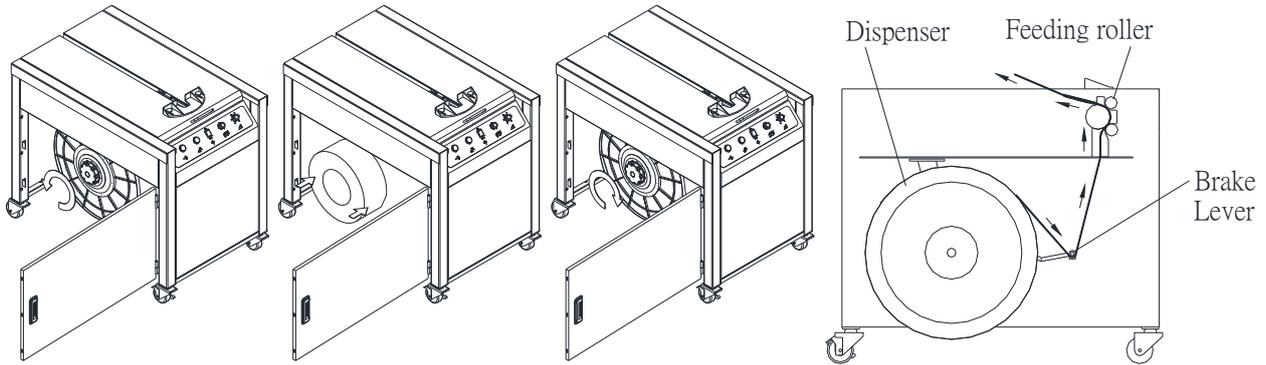


☞ **3.2.1 Operator controls and indicators**

1. Power Switch : 1:ON , 0:OFF
2. Tension Adjust Knob: Strap tension is to be adjusted by this knob.
3. Strap feeding Adjust Knob
 - Setting the feeding length of strap.
 - Turn clockwise for longer strap.
 - Counter clockwise for shorter strap.
4. Feeding push button: Push and Hold to Feeding the strap.
 - Release to stop the Feeding strap.
5. Reset push button:
 - Complete one strap cycle and cam return to the home position.



3.2.2 Loading and ejecting the strap



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Strap Coil Loading

PP Strap Loading

● Instruction of power supply:

1. Loosen the Dispenser Handle counter clockwise and pull it out.
2. Remove the front plate and Empty coil.
3. Mount a Full strap coil to the dispenser core.
4. Back the front plate to Dispenser.
5. Fixed the Dispenser Handle to the shaft.
6. Make sure that the strap is Mount in the right direction clock wise.

3.4 P.P Strap Loading:

1. Pull the strap through roller of brake Lever.
2. Then pull the strap from the guide into the Feeding roller. (Please Hold the strap touch the roller)
3. Press and Hold the Feeding push Button, then the strap will be out the table, Release the push Button the strap will

be stop feed.

3.5 Connect to the power supply:

1. Check the machine name plate and confirm the power voltage is match to the power supply.
2. Make sure the power switch is OFF(O).
3. Insert the power cord into the power supply socket.
4. Turn or push the power switch to on(I).
5. Wait about 40 Second to Heater Temperature is enough.
6. Power must be supplied directly from an independent socket without putting many loads on one electric outlet. If power cord on machine is to be connected to extension cord, the section diameter size should be 1.5mm² or larger.



3.6 Starting the strapping machine

● Strapping start:

Place a package on the top of the machine. And pass the free end around the package. Insert the leading end of the strap into the strapping inlet until the leading end is detected to LS1. The machine will be finish one strap cycle.

● Feeding length:

Tightening of strapping starts as soon as the strap is detected LS1 and the heat sealing process automatically takes place after completion of tightening. After these processes have been completed, a preset length of strapping is Feeding automatically. This is one complete cycle.

- ***Be sure to turn off the main power switch after operation is completed for the day.***

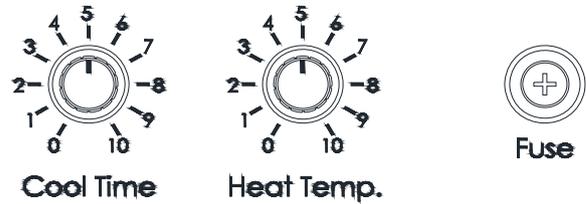
4 **Adjustments**



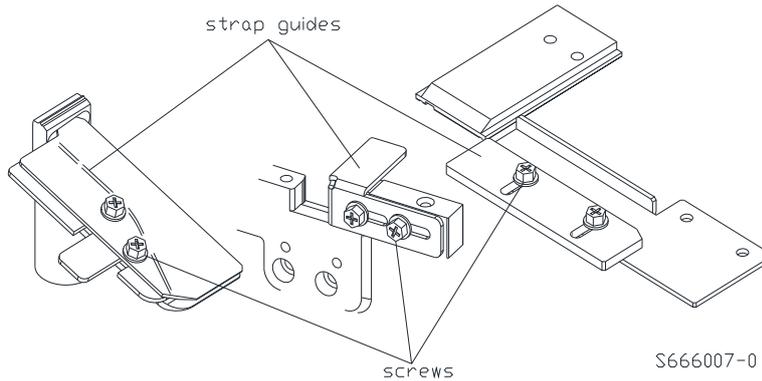
4.1 Welding temperature adjustment and cooling time

1. The temperature is setting around 310+ 30°C ex work.
2. The temperature can be adjusted when the heater does not reach the working temperature.
3. Turn the Knob clockwise for higher temperature. Counter clockwise for lower temperature.
4. The heater will reach workable temperature about 40 seconds after power on.

5. The cooling time can be adjusted by knob. Turn clockwise to increase it when high tension it will be get better seal equality.



4.2 Setting strap width

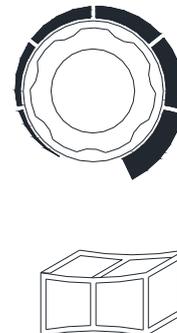


1. Adjustment for straps wide from strap width adjust unit to different width can be done with Philip screw driver.
2. Strap guides have to be adjusted so there is a clearance between strap and guide of 0.5mm to 1.0mm.
3. Make adjustments by loosening two screws and moving the guide to fit the strap which is to be used.



4.3 Basic setting of the strap tension

1. The strap tension can be setting by knob from operator panel.
2. Turn the knob clockwise, the tension will be getting more.
3. The Tension rang is minimum 5kg and maximum 40kg.



Tension Setting

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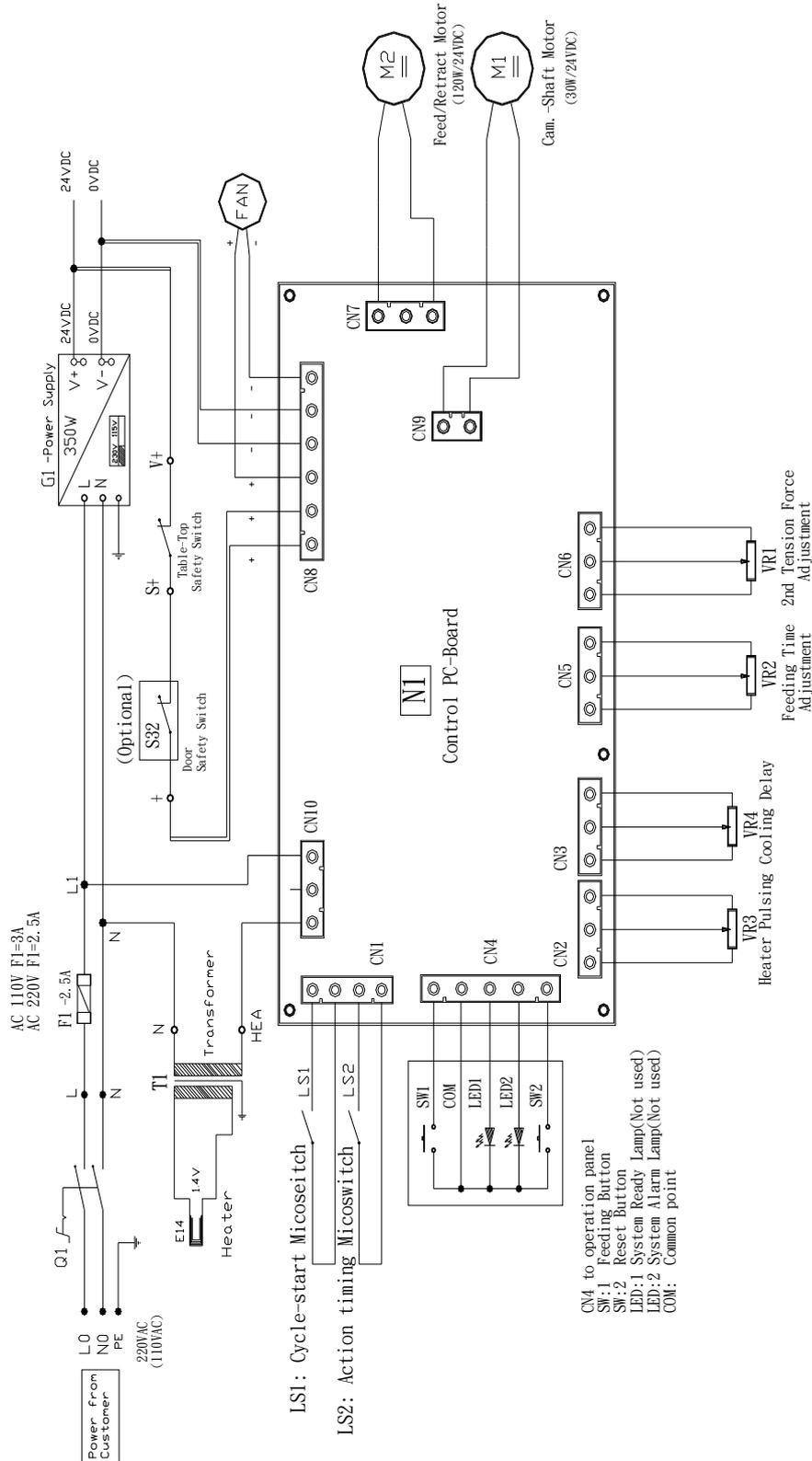
Preventive Maintenance

Task	Weekly	Monthly	After approx. 100000 strapping
1. Blow out sealing head, strap guides and fan with compressed air.	√		
2. Clean heating element with fine cleaning cloth (do not bend heating element.) Notice: First allow heating element to cool down.		√	
3. Clean clamp, strap separator and slide plate		√	

Fault	Action
1. Drive motor does not run	<ul style="list-style-type: none"> ⇒ Check whether the machine is connected to the power. ⇒ Check whether the power switch is on. (See table 3.2.1) ⇒ Check whether the table top and front door are correctly closed and the switches triggered by them work normally. ⇒ Check F1 fuse.
2. Machine does not run, drive motor "buzzes"	<ul style="list-style-type: none"> ⇒ Close table top and front door, turn power switch off and then on again, press the reset (See table 3.2.1)
3. Drive motor runs, strap does not advance	<ul style="list-style-type: none"> ⇒ Press the reset to remove strap remnants. (See table 3.2.1) ⇒ Check whether there is still strap on the coil. ⇒ Check whether strap is correctly inserted. ⇒ Check functioning of M2 DC motor.
4. Strap length is too long or short	<ul style="list-style-type: none"> ⇒ Check the feeding dial. (See table 3.2.1)
5. Strap take-up does not function	<ul style="list-style-type: none"> ⇒ Press the reset to remove strap remnants. (See table 3.2.1) ⇒ Check control board. ⇒ Check functioning of M2 Dc motor.
6. No welding	<ul style="list-style-type: none"> ⇒ Check height setting of the heating element. ⇒ Check heating element ⇒ Check press bar. (See drawing 8.1 seal unit NO.115) ⇒ Check fuse F1
7. Welding insufficient	<ul style="list-style-type: none"> ⇒ Check setting of welding temperature (temperature range from 320° to 360°) (See table 4.1) ⇒ Heating element bent: exchange.

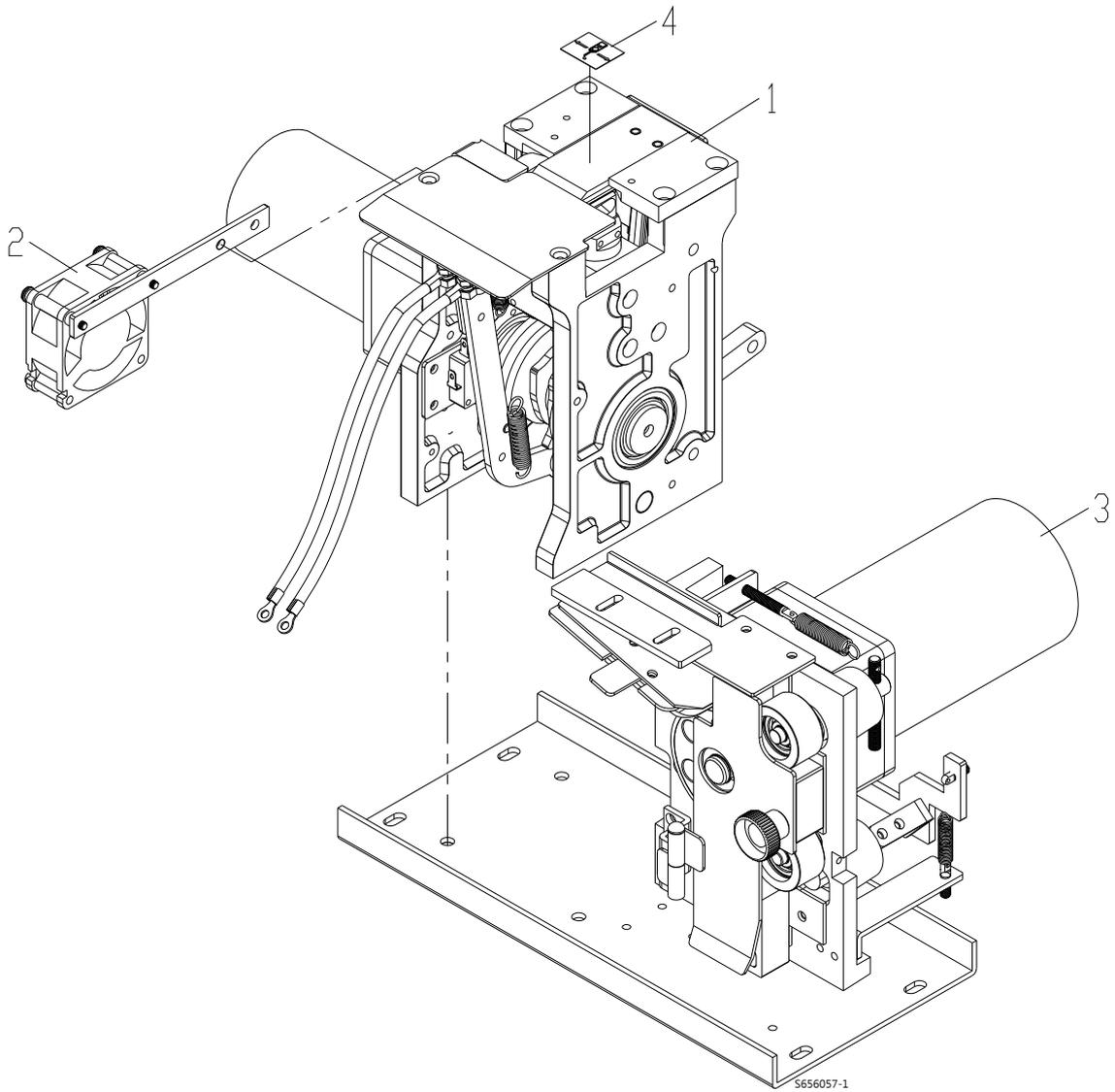
7.1

Control board



8.1

Seal Unit



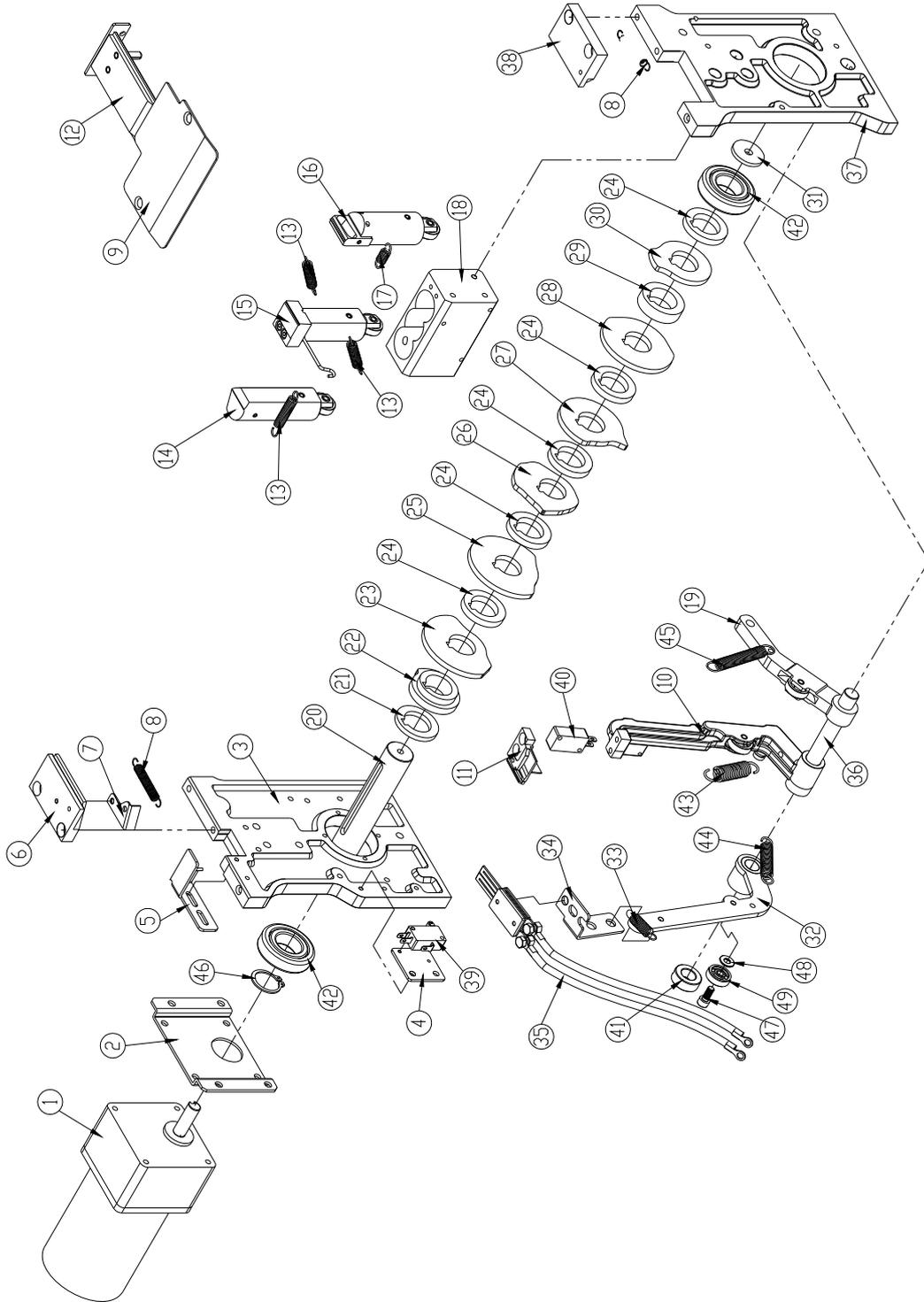
8.1

Seal Unit

No.	Part No.	Part Name	Q'Ty	Remark
1	S65-111000-2	Seal Unit	1	
2	S65-111100-0	Fan Assembly	1	
3	S65-120000-7	Feed Assembly	1	
4	P08-265007-0	Label	1	

8.1.1

Seal Unit



S656044-3

8.1.1

Seal Unit

No.	Part No.	Part Name	Q'Ty	Remark
1	E01-070021	Drive Motor M1	1	
2	S65-111002-0	Motor Bracket	1	
3	S65-111003-0	Left Base plate	1	
4	S65-111004-0	Micro Switch Bracket	1	
5	S65-111005-0	Strap Guide Adjustment Plate	1	
6	S65-111006-0	Left slide table Guide	1	
7	S65-111007-0	Rear Guide	1	
8	S65-111008-0	Slide Table Spring	2	
9	S65-111009-0	Heater Cover	1	
10	S65-111010-0	Separator Arm	1	
11	S65-111011-1	Strapping Separator Assembly	1	
12	S65-111012-0	Slide Table Assembly	1	
13	S65-111013-0	Gripper Spring(L)	3	
14	S65-111014-0	Left Gripper Sub-Assembly	1	
15	S65-111015-0	Press Bar Sub-Assembly	1	
16	S65-111016-1	Right gripper Sub-Assembly	1	
17	S65-111017-0	Gripper Spring(R)	1	
18	S65-111018-0	Bar Seat	1	
19	S65-111019-0	Tension Cam Arm	1	
20	S65-111020-0	Cam Shaft	1	
21	S65-111021-0	Spacer (4)	1	
22	S65-111022-0	Home Cam	1	
23	S65-111023-0	Left Gripper Cam	1	
24	S65-111024-0	Spacer (5.5)	5	
25	S65-111025-0	Heater Cam	1	
26	S65-111026-0	Press Bar Cam	1	
27	S65-111027-0	Separator Cam	1	
28	S65-111028-0	Right Gripper Cam	1	
29	S65-111029-0	Spacer (9.7)	1	
30	S65-111030-0	Tension Lever Cam	1	
31	S65-111031-0	Washer	1	
32	S65-111032-0	Heater Arm	1	
33	S65-111033-0	Heater Arm Spring	1	
34	S65-111034-0	Heater Bracket	1	
35	S65-111035-1	Heater Assembly	1	
36	S65-111036-0	Heater Arm Shaft	1	
37	S65-111037-0	Right Base Plate	1	

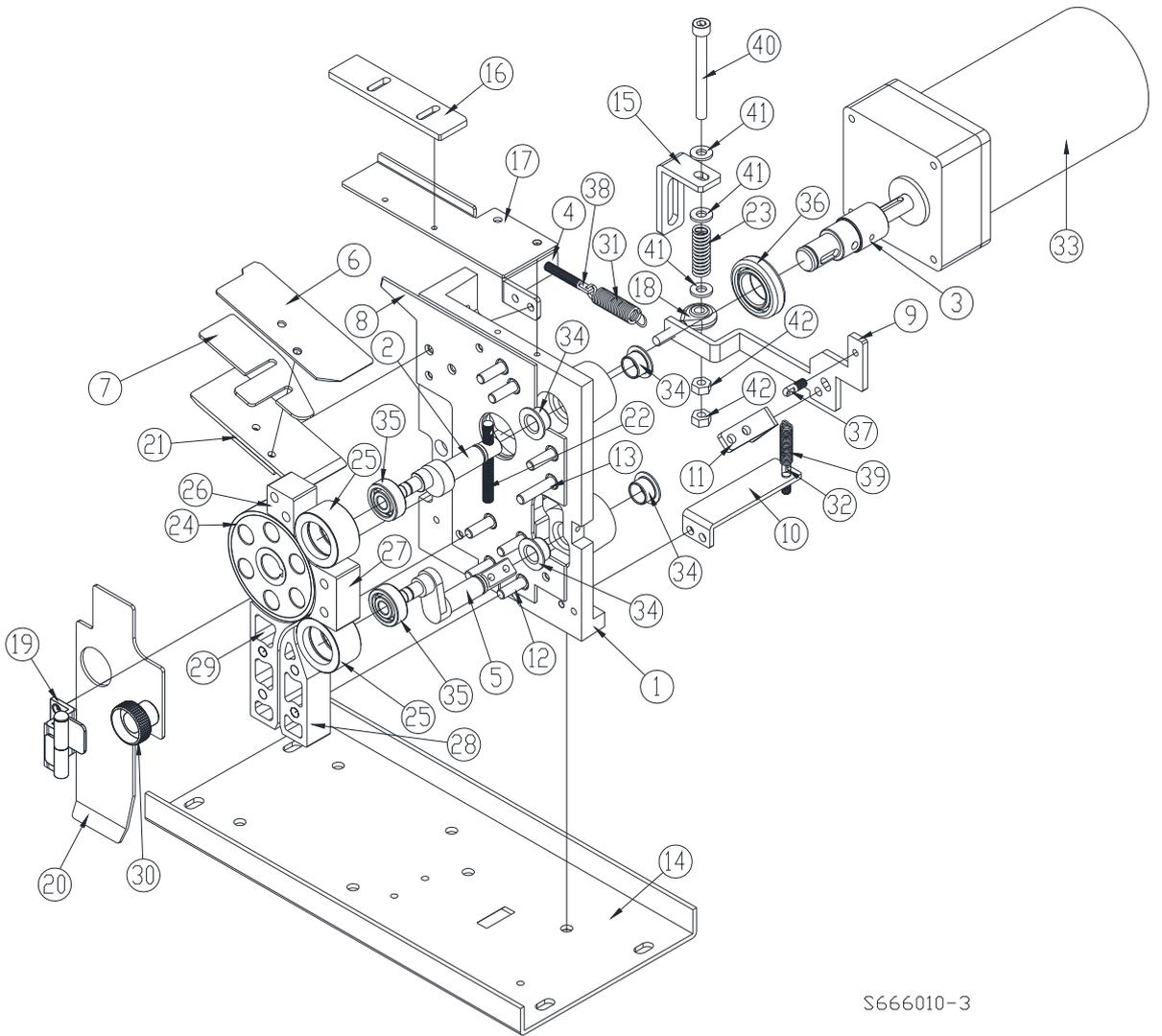
8.1.1

Seal Unit

No.	Part No.	Part Name	Q'Ty	Remark
38	S65-111038-0	Right Chute	1	
39	S65-111039-0	Micro Switch (Home)	1	#301
40	S65-111040-0	Micro Switch (Start)	1	#302
41	S65-111041-0	Fixed Collar	1	
42	S65-111042-0	Ball Bearing	2	60/22-2RZ
43	S65-111043-0	Spring	1	
44	S65-111044-0	Spring	1	
45	S65-111046-0	Spring	1	
46	W33-020220	C Type-Ring-C22	1	
47	W01-210512	HBS M5X12L	1	M5X12L
48	W19-010105	M5 Washer	1	
49	G04-210635	Ball Bearing 635ZZ	1	

8.1.2

Feed Ass'y Assembly



S666010-3

8.1.2

Feed Ass'y Assembly

No.	Part No.	Part Name	Q'Ty	Remark
1	S65-120001-6	Tension Unit Base	1	
2	S65-120002-2	Feed Roller Shaft	1	
3	S65-120003-3	Main Roller Shift	1	
4	S65-120004-2	Feed Spring Stud Bracket	1	
5	S65-120005-2	Tension Roller Shaft	1	
6	S65-120006-2	Guide Plate (Upper)	1	
7	S65-120007-2	Guide Plate (Adjust)	1	
8	S65-120010-4	Guide Plate (inner)	1	
9	S65-120011-3	Tension Lever	1	
10	S65-120012-2	Spring Stud Bracket	1	
11	S65-120015-1	Tension Shaft Connector	1	
12	S65-120017-1	Guide Location Pin	7	
13	S65-120018-1	Guide Location Pin (Nut)	1	
14	S65-120020-3	Seal - Heal Plate	1	
15	S65-120021-2	Tension Set Lever	1	
16	S65-120022-1	Insert Strap Guide	1	
17	S65-120023-1	Insert Strap Guide Base	1	
18	S65-120024-0	Universal Bearing	1	
19	S65-120050-1	Guide Plate Hinge	1	
20	S65-120150-2	Guide Plate (Outer)	1	
21	S65-120350	Guide Plate (Lower)	1	
22	A20-173003	Feed Adjust Spring Stud	1	
23	S35-160021	Spring	1	
24	S55-100001-0	Main Roller	1	
25	S55-100010-0	Tension Roller	2	
26	S55-100019-1	Guide (Upper)	1	
27	S55-100020-1	Guide (Side)	1	
28	S55-100022-1	Inlet Right Guide	1	
29	S55-100021-1	Inlet Left Guide	1	
30	S55-100032-0	Guide Plate Knob	1	
31	S55-101019-0	Slide Table Spring	1	
32	1A14-C0122-00	Spring Stud	1	
33	E01-070014	F/R Motor	1	
34	G01-121408F	DU Bushing	4	
35	G04-210628	Ball Bearing	2	628ZZ
36	G04-216904	Ball Bearing	1	6904ZZ
37	OW-340-00	Spring Stud	1	

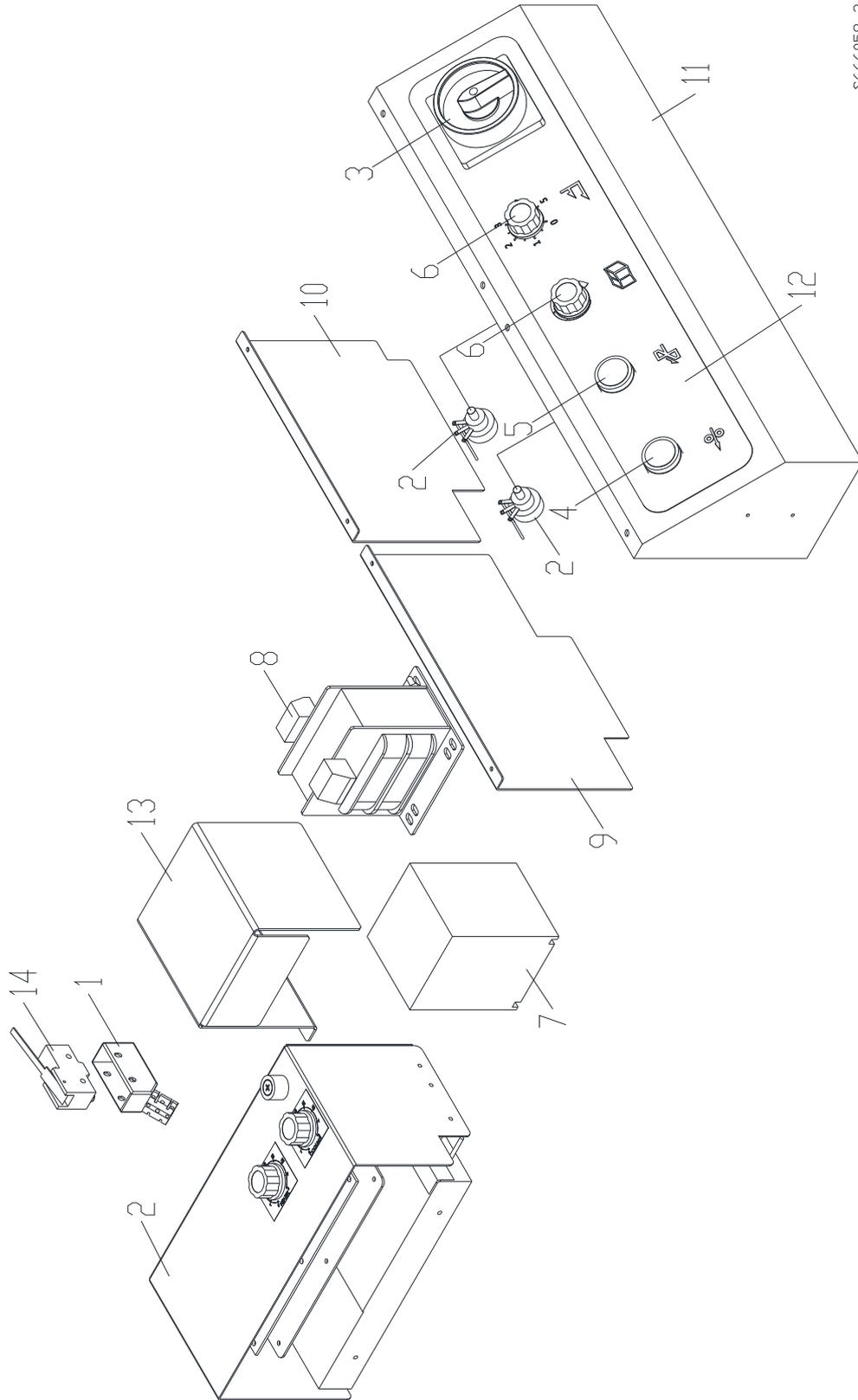
8.1.2

Feed Ass'y Assembly

No.	Part No.	Part Name	Q'Ty	Remark
38	WSG-1222	Spring Stud	1	
39	X6626	Spring	1	
40	W01-210655	HN M6x60	1	
41	W19-010106-2	Washer D13xd6x1.5t	3	
42	W15-110600	Nut M6	2	

8.2

Electric Unit



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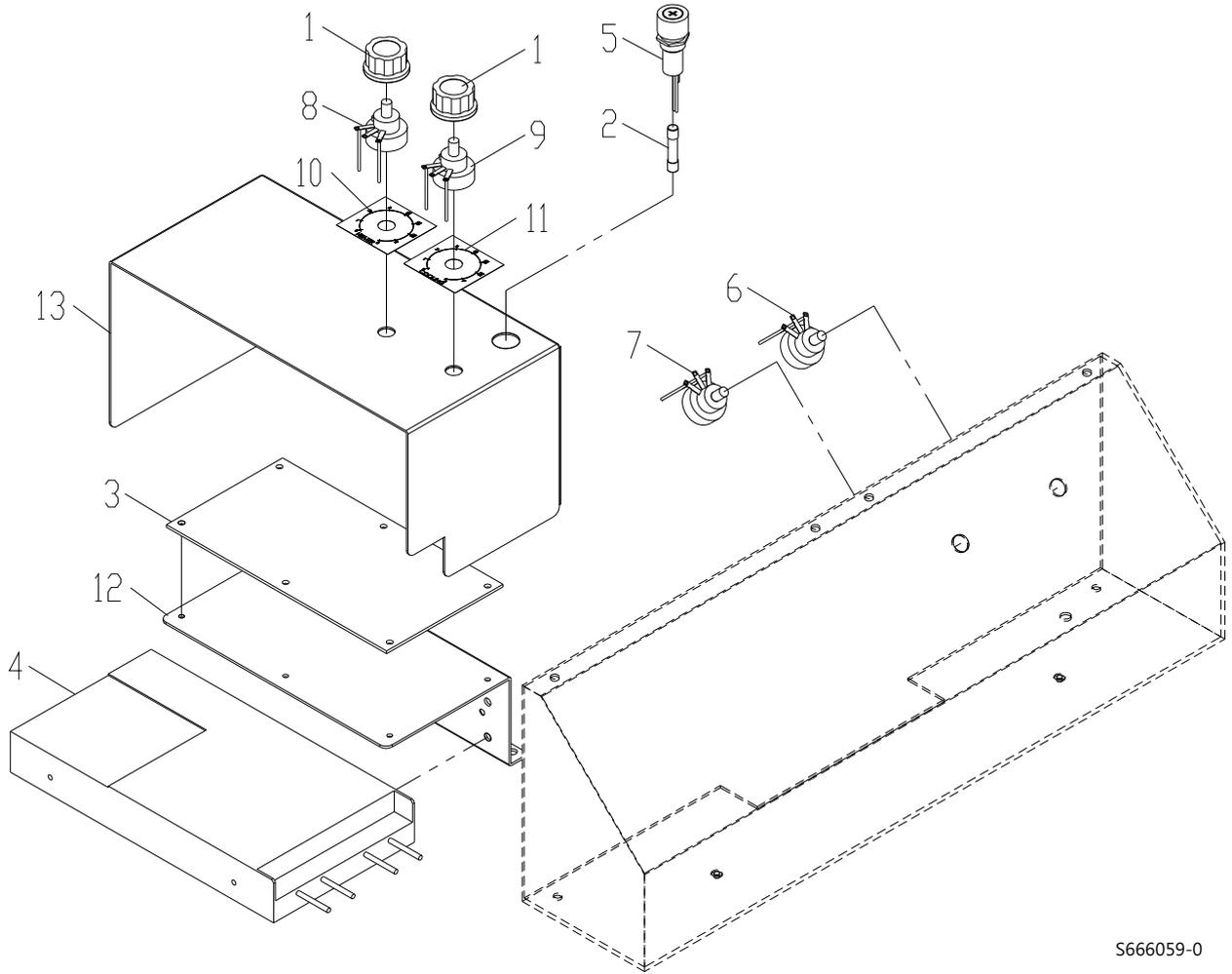
8.2

Electric Unit

No.	Part No.	Part Name	Q'Ty	Remark
1	A20-210027	Micro Switch Cover CB-2	1	
2	BS20000-32	Control Box	1	
3	E07-010057	Power Switch	1	
4	E07-020028	Push Button -Green	1	
5	E07-020043	Push Button -Yellow	1	
6	E07-070002	Knob	4	
7	E17-010074	Transformer	1	220V
8	E17-010084	Transformer	1	110V
9	S66-200003-1	Rear Cover (L)	1	
10	S66-200004-1	Rear Cover (R)	1	
11	S66-200006-2	Operate Panel Box	1	
12	S66-200007-1	Operate Panel	1	
13	S66-200012-0	Transformer Cover	1	
14	XZ15GM4B	Micro Switch Z15G1701	1	

8.2.1

Electric Box Unit



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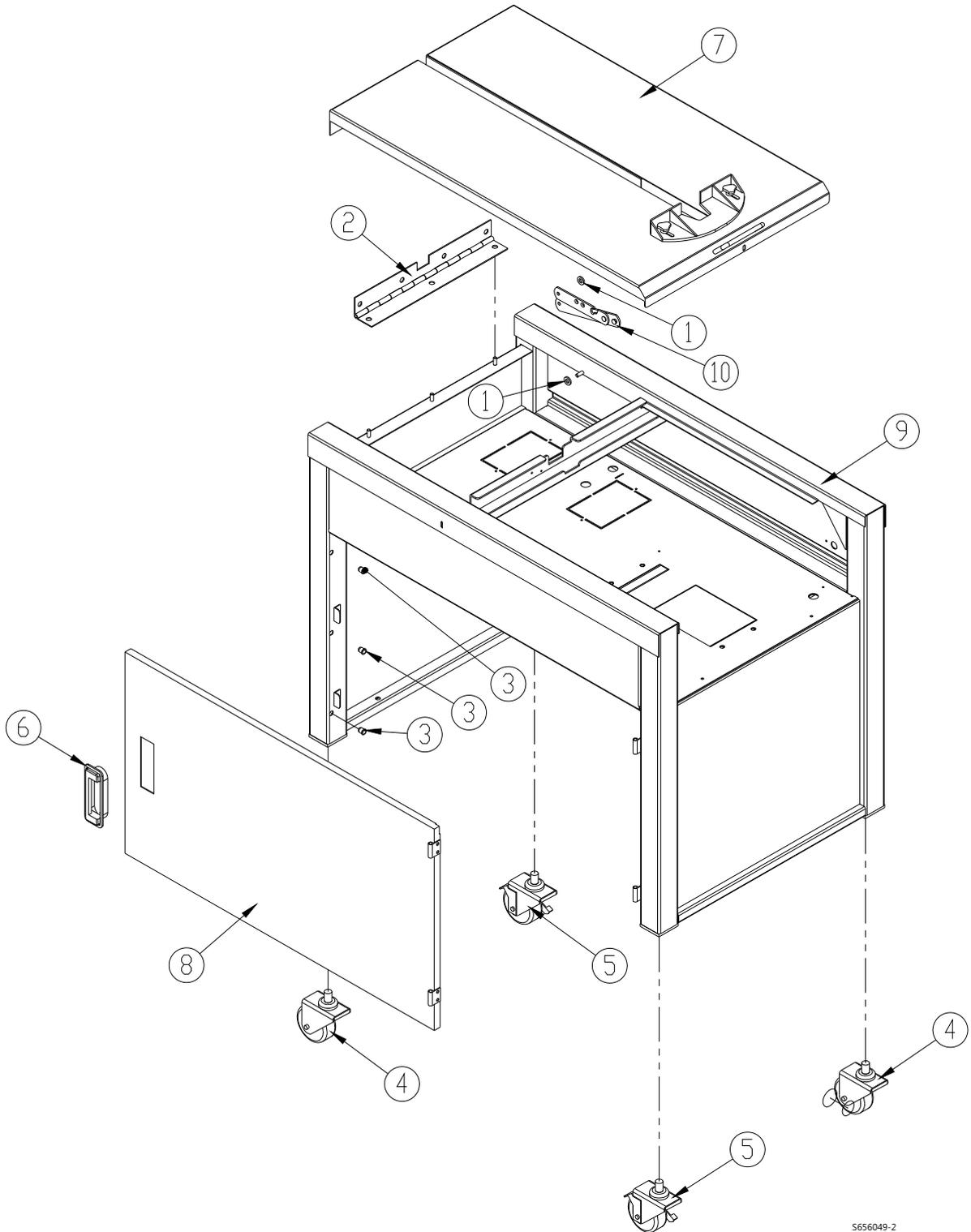
8.2.1

Electric Box Unit

No.	Part No.	Part Name	Q'Ty	Remark
1	E07-070002	Knob RN-99D	2	
2	E23-010060	Fuse	1	
3	E25-101253-4	Main PC Board	1	
4	E25-101282	Power Supplier	1	
5	E66-656016	Fuse Seat	1	
6	E66-656022-1	VR1(tension)	1	
7	E66-656023-1	VR2(feeding)	1	
8	E66-656024-1	VR3(heater)	1	
9	E66-656025-1	VR4(cooling)	1	
10	P08-100014	Electric Heater Scale Sticker	1	
11	P08-100057	Cooling Scale Sticker	1	
12	S65-200008-0	PCB Fixed Plate	1	
13	S66-200010-1	Power Supplier Cover	1	

8.3

Frame unit



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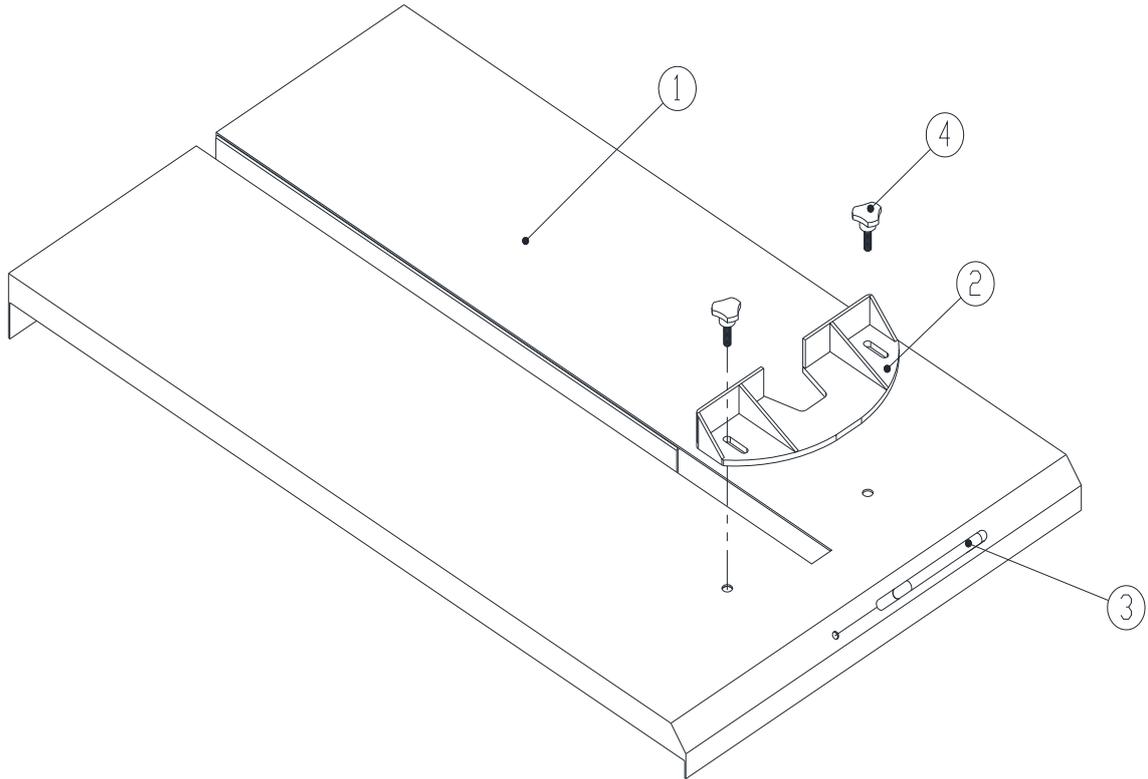
8.3

Frame unit

No.	Part No.	Part Name	Q'Ty	Remark
1	K1821_020_062	spacer	2	
2	1835.015.028	Hinge	1	
3	S13-330053	Ball lock	3	
4	S23-300011-2	Caster Swivel	2	
5	S23-300012-2	Caster With Brake	2	
6	S35-300027	Handle	1	
7	S65-320000-1	Table	1	
8	S65-340150-0	Door (F)	1	
9	S65-350050-1	Frame	1	
10	OS0006-0	Table Lifter	1	

8.3.1

Table Unit



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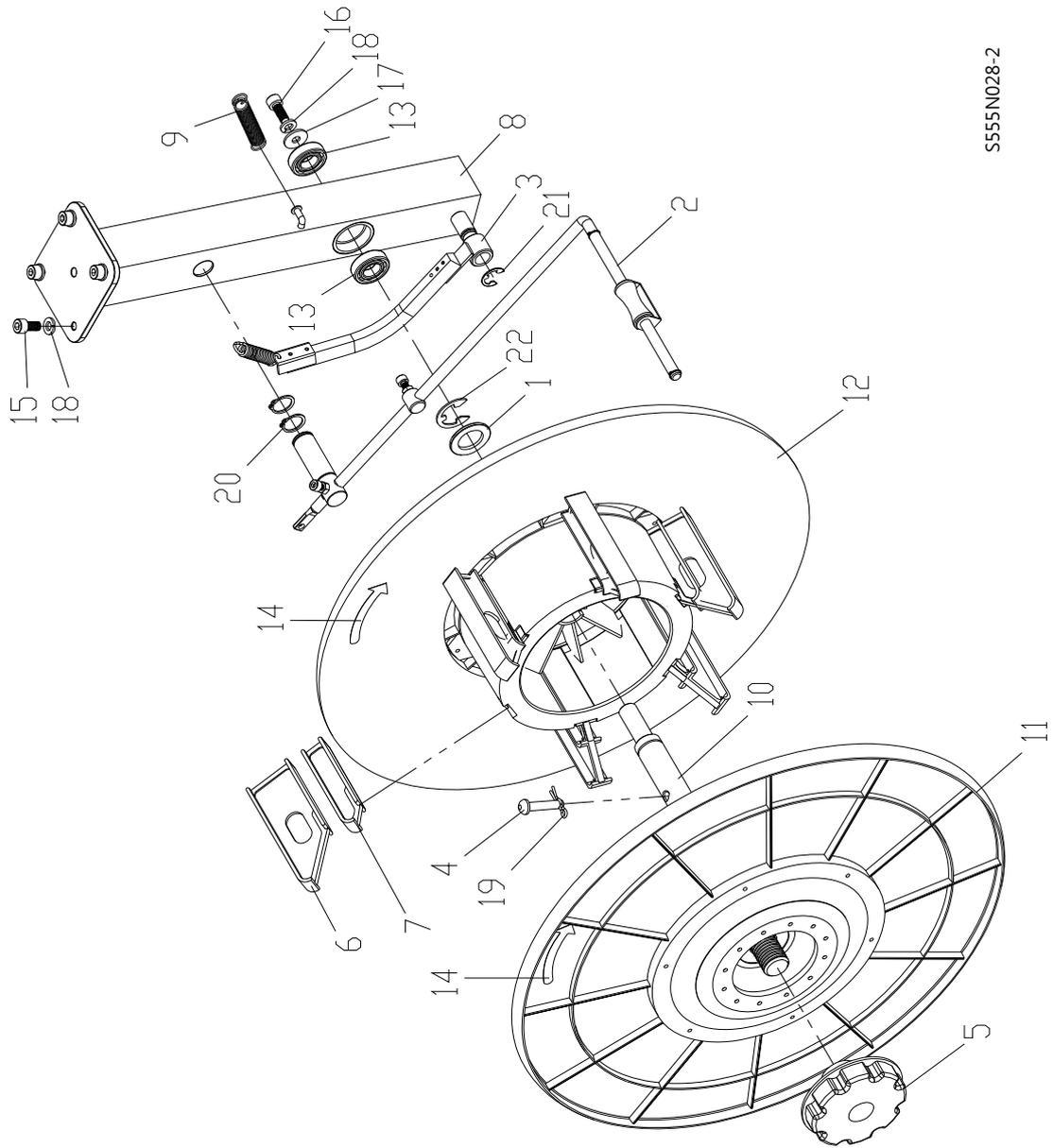
8.3.1

Table Unit

No.	Part No.	Part Name	Q'Ty	Remark
1	S65-320150-1	Table Unit	1	
2	S13-300008-R2	Package Guide	1	
3	A68C001-0	Handle	1	
4	S13-300009-0	Knob M6x20L	2	

8.4

Dispenser Unit(S23-430000-120)



S555N028-2

8.5

Dispenser Unit(S23-430000-120)

No.	Part No.	Part Name	Q'Ty	Remark
1	A20-630007-1	Washer	1	
2	BS42001-01	Brake Arm	1	
3	BS42002	Belt Unit	1	
4	S13-410006	Pin	1	
5	S13-450001	Reel Nut Handle (R)	1	
6	S13-450002	Adjustable Reel Clip	6	option 280mm
7	S13-450003	Adjustable Reel Clip	6	option 230mm
8	S23-421350-0	Reel Support	1	
9	S23-423003	Spring	1	
10	S23-430002	Reel Shaft	1	
11	S23-430003-120	Reel Side Plate (Outside)	1	
12	S23-431050-120	Reel Side Plate (Inside)	1	
13	G04-116003	Ball Bearing	2	6003ZZ
14	P08-120005	Sticker	2	E19
15	W01-210816	HBS M6x16L	4	M8x16L
16	W01-210820	HBS M8x20L	1	M8x20L
17	W19-010108-1	Washer $\Phi 8 \times \Phi 23 \times 2t$	1	M8
18	W19-020108	Spring Washer	5	M8
19	W31-208000	R Pin	1	R8
20	W33-020200	C Type Stop ring	2	
21	W33-030120	E Type Stop ring	1	
22	W33-030190	E Type Snap Ring	1	E12