
1-GPEXP-103

Pallet Wrapping Machine

PALLET STRETCH WRAPPING MACHINE

MODEL: EXP-103

OPERATION MANUAL

2023.11.06



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1. GENERAL INFORMATION

1.1 NOTE OF INSTALLATION

To make sure a safe and correct operation, please check below conditions before install the machine:

- 1) Power source capacity must be equal of the machine need.
- 2) Machine standard power is 110v/220v (+- 10%)
- 3) Machine standard power Hertz is 50/60 Hz. (+- 2%)
- 4) Machine is workable under the temperature between 0°C - 45°C
- 5) Make sure the wire is tidy on the ground.
- 6) There should not have vibration beside the machine during the installment, and make sure the ground is flat.
- 7) Read and follow the instruction of the installment.



1.2 NOTICE OF OPERATION

To have good protection for the operator, please make sure the following conditions:

- 1) Before operating, please read the machine operational manual carefully.
- 2) Make sure there is no object put on the power cable.
- 3) Make sure there is no object put on the upper carriage unit.
- 4) Avoid any damp object or water around the electric parts.
- 5) Avoid film winded into the turntable.
- 6) Do not stand on or across the machine during operation.
- 7) When problem occurs, please check the section of 5 Trouble shooting



2. SPECIFICATION

2.1 SPEC. TABLE

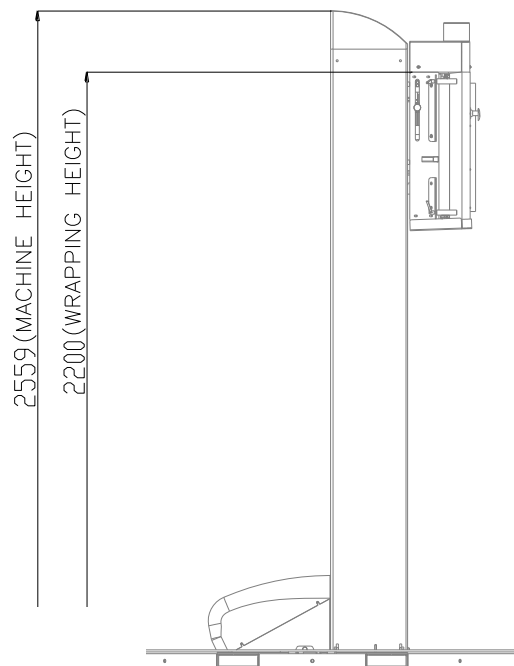
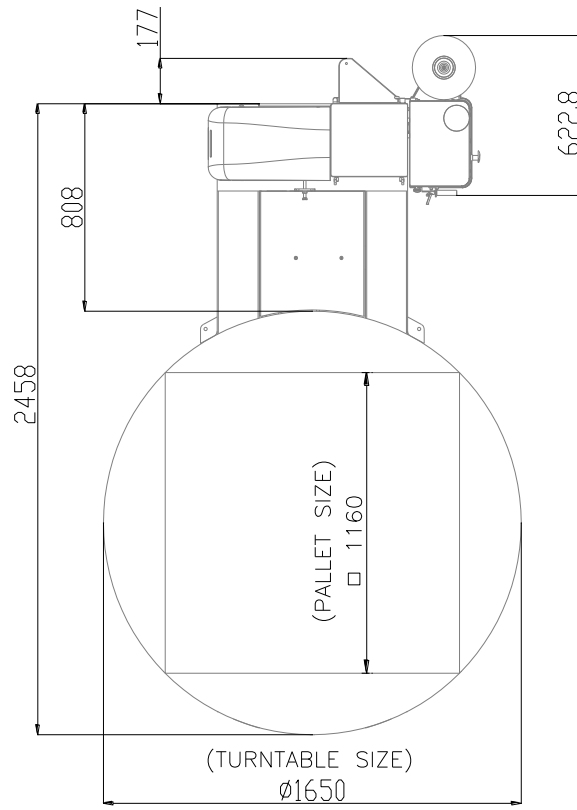
Model	EXP-103
Turntable Speed	3 ~ 12 RPM
Turntable dia.	1500mm
Max wrapping height	2200mm
Pallet size	1050x1050mm
Max loading weight	2000kgs
Film stretch (%)	300% & 230% two step change by handle (250% and 200% option)
Film tension	Adjustable – 3 STAGES SETTING
Carriage Unit speed	1.5 ~ 5m/min
Max. film spec.	φ250x500mm
Turntable height	71mm
Machine size	2458x1500x2559mm.

Standard option:

- ❖ 1.65 & 1.80 meters diameter Turntable.
- ❖ 2.6 & 3.0 meters wrapping height
- ❖ Top pressure plate driven by motor
- ❖ Ramp

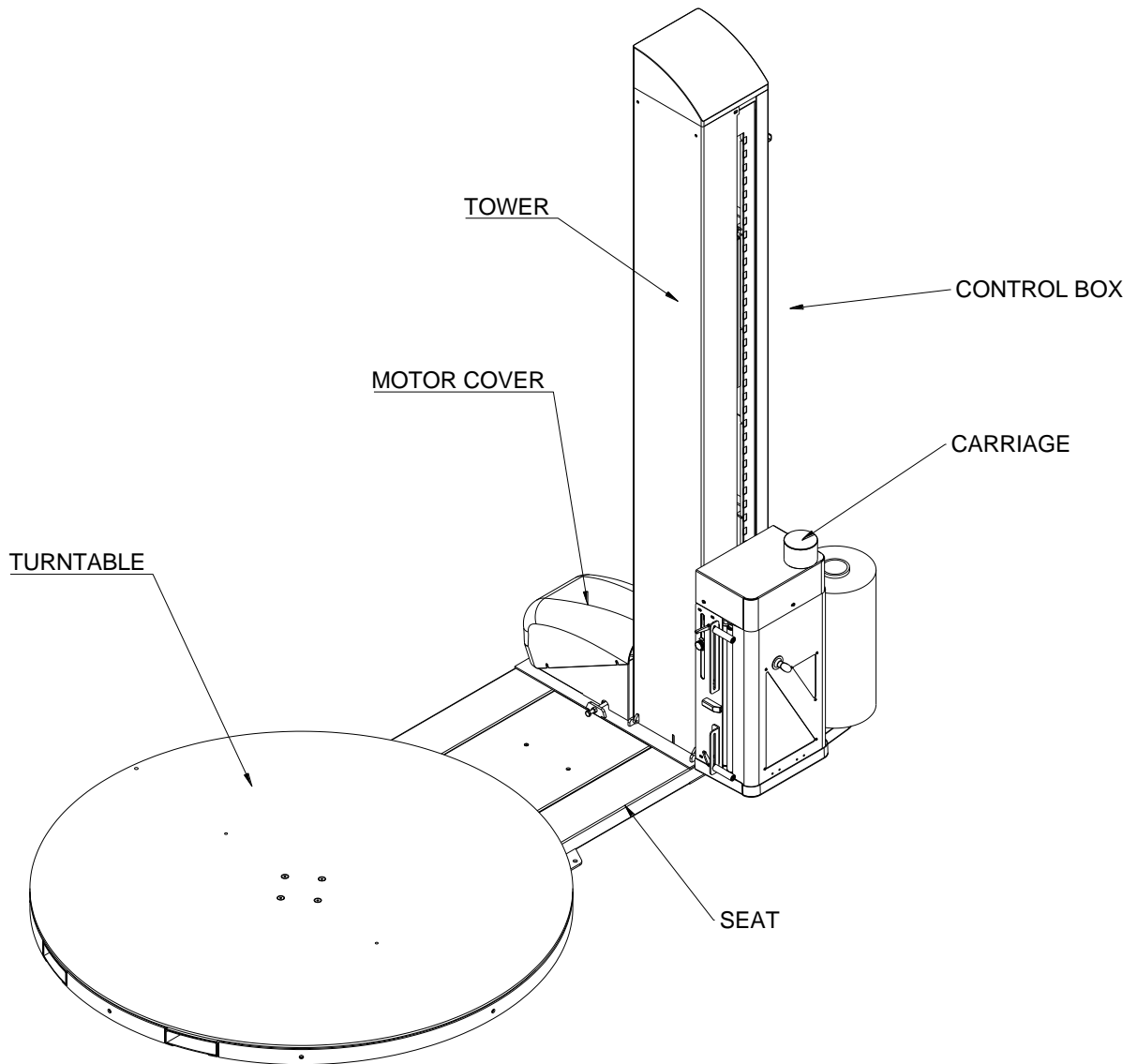


2.2 MACHINE DIMENSION



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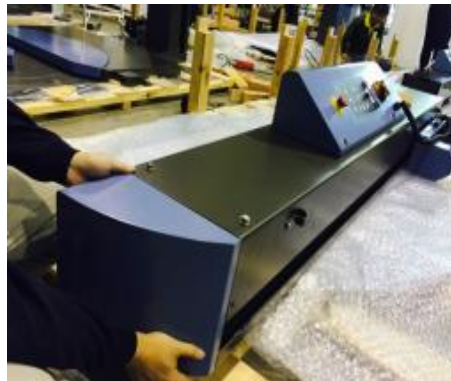
2.3 MACHINE DESCRIPTION



3. OPERATION DESCRIPTION

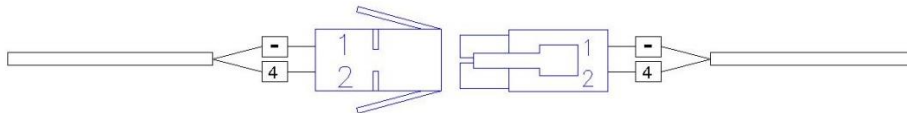
3.1 INSTALLATION

- 1) Apart all the wooden package. Avoid damaging the machine.
- 2) Move the machine to an installment position by fork lift.
- 3) Install master cover and tighten screws on both side.



- 4) Lift up the tower.
- 5) Fix and tighten the tower by M8 screws. Total 6 screws on each side.
- 6) Connect the sensor wires.

Proximity Switch: “—”& 4.



- 7) Install the motor cover and support brackets.



Total 4 screws required.

Connect the power cable with the socket by a 110V/230V power.

3.2 INSTALLATION REMINDERS

Tower Installation

Engineers must ensure all screws are properly installed underneath the tower, and evenly lay out.

Control Panel Installation

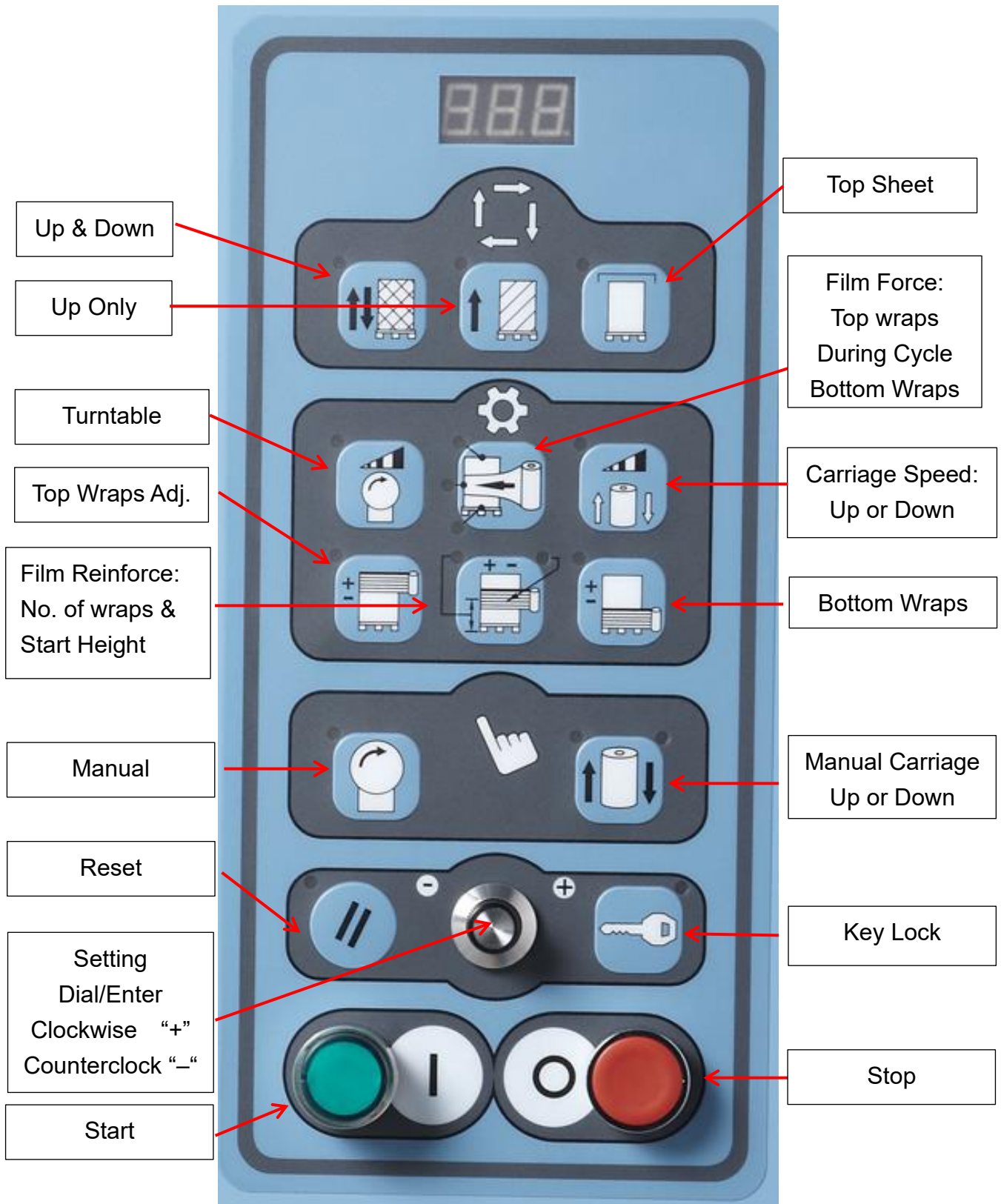
Engineers must make sure the control panel is removed from supporting bracket, and is installed properly.

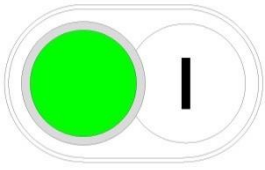


3.3 OPERATION OF CONTROL PANEL



3.4 OPERATION DESCRIPTION

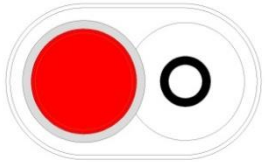




START BUTTON

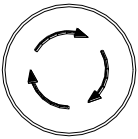
Press this button to start operation.

Note: After all of function been set, press this button to start the program



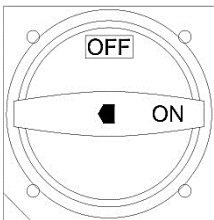
PAUSE BUTTON

Press the button; the machine will be stop whether it is under automatic or manual mode. Press the START button to complete the remaining program.



EMG. STOP

Pressing this button to make emergency stop.



MAIN POWER

This is the main power switch.

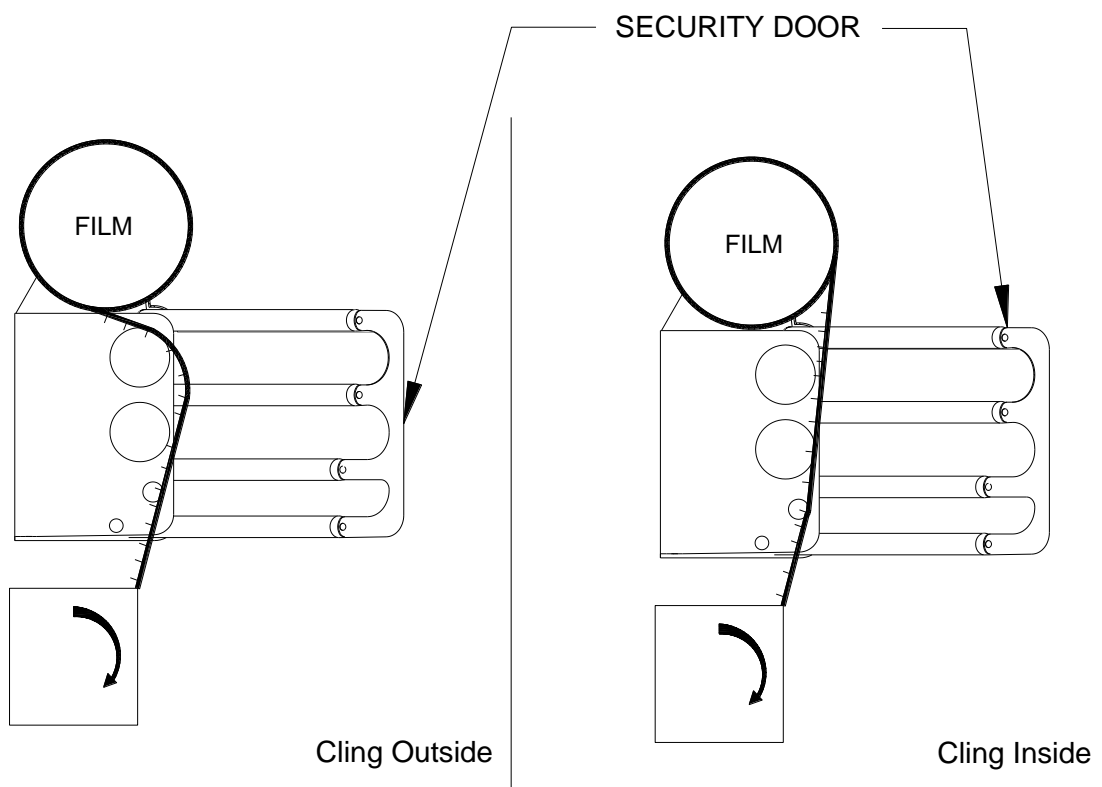


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3.3 CARRIAGE UNIT

1) Illustration for film threading

1. OPEN THE SAFETY DOOR.
2. Pull the film across the film carriage.
3. CLOSE THE SAFETY DOOR



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4. ELECTRICAL

4.1 ELECTRICAL CAPACITY

1) Power Consumption

Pre-stretch motor	0.2 KW
Turntable motor	0.75 KW
Carriage motor	0.4KW
Control & wiring box	DC 24V 50W
Machine power consumption	1.5 KW
Power requirement	1.7 KW

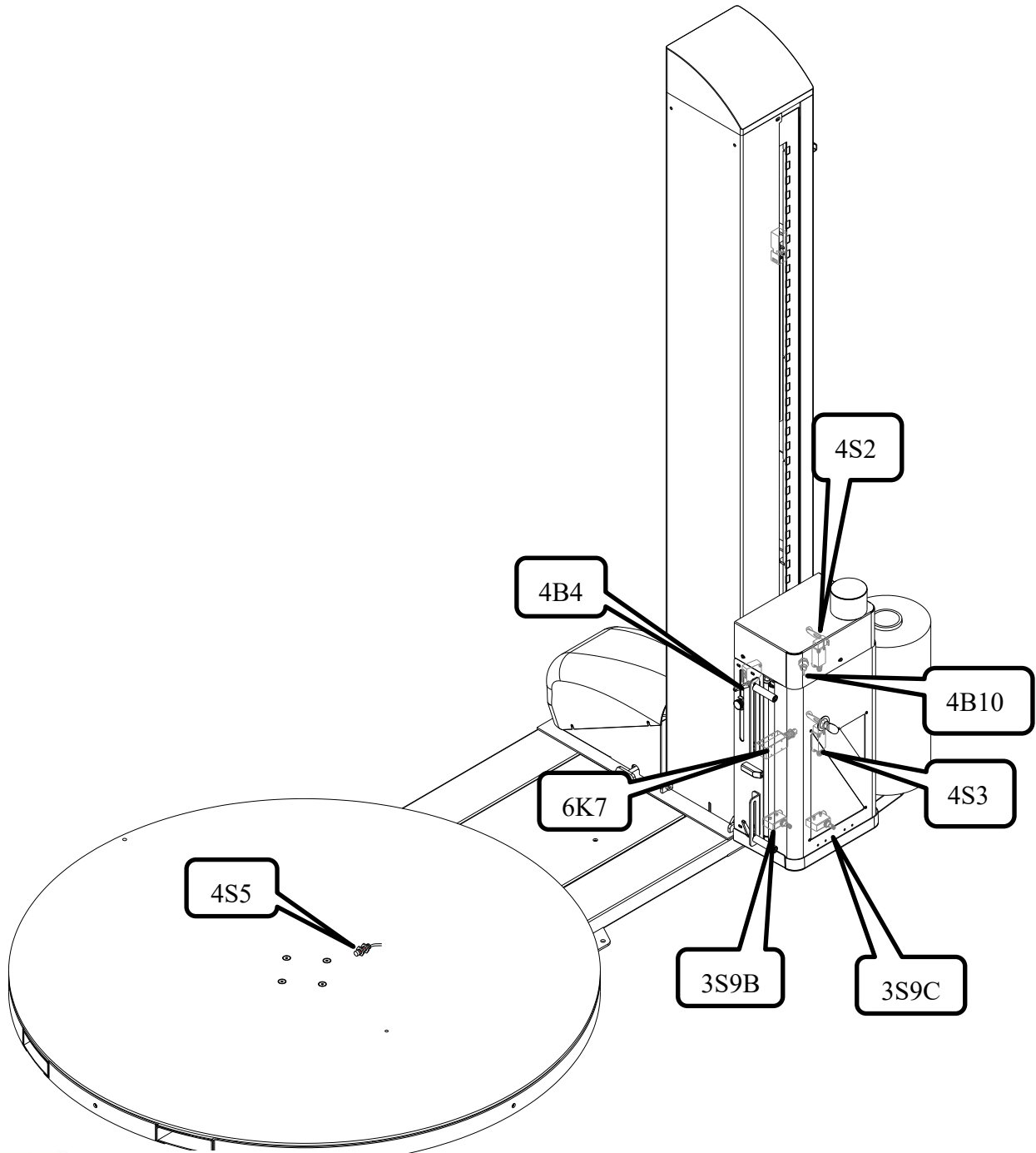
2) Power Cable ----- 1.25 mm²

3) Machine input ----- 110V / 230V 1-PHASE



4.2 ELECTRICAL DIAGRAM

Sensor / limit switch location

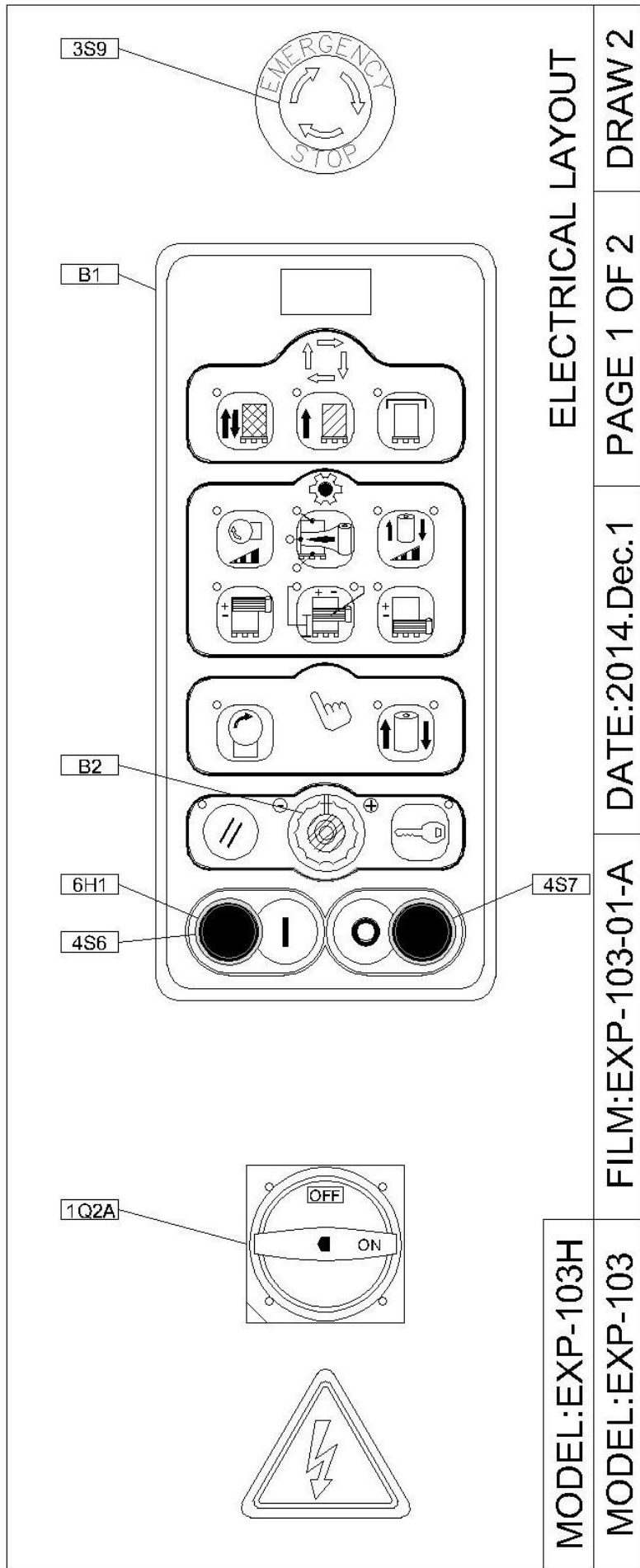


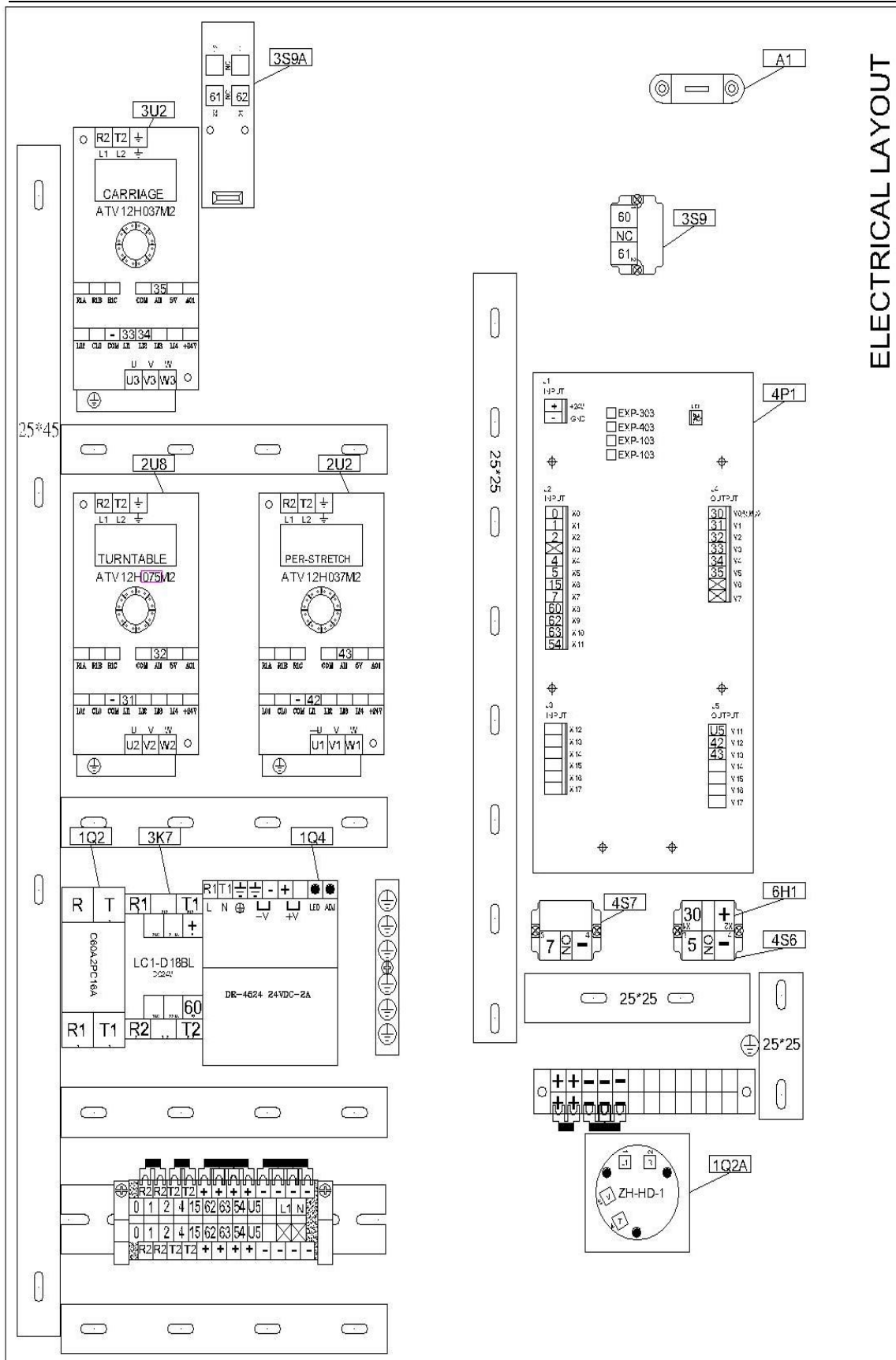
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KEY NO	PART NO	DESCRIPTION	Q'TY
3S9B	P0311-060001400	LIMIT SWITCH ML-7312	1
3S9C	P0311-060001400	LIMIT SWITCH ML-7312	1
4S2	P0311-060001100	LIMIT SWITCH TZ-8108	1
4S3	P0311-060001100	LIMIT SWITCH TZ-8108	1
4B4	P0302-020000200	PHOTO SENSOR A3R-2MX	1
4S5	P0319-10P10316	PROX SWITCH PM12-04N (WITH PLUGS)	1
4B10	P0302-010001600	PROX SWITCH XS4-P18-AB110	1
6K7	P0301-0000300	SOLENOID SH-1585 (DC24V)	1



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ELECTRICAL LAYOUT

PAGE 1 OF 2

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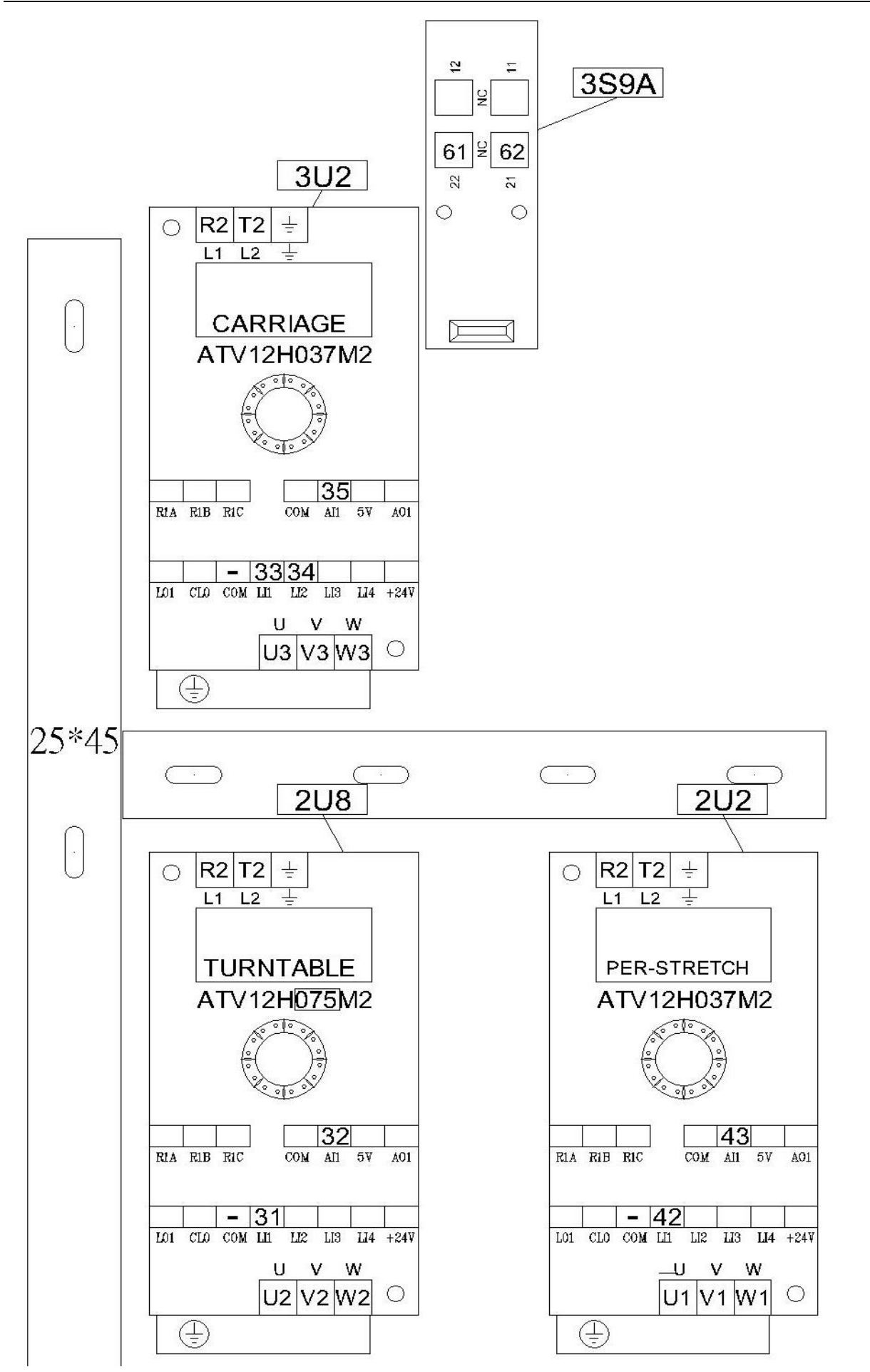
FILM:EXP-103-01-A

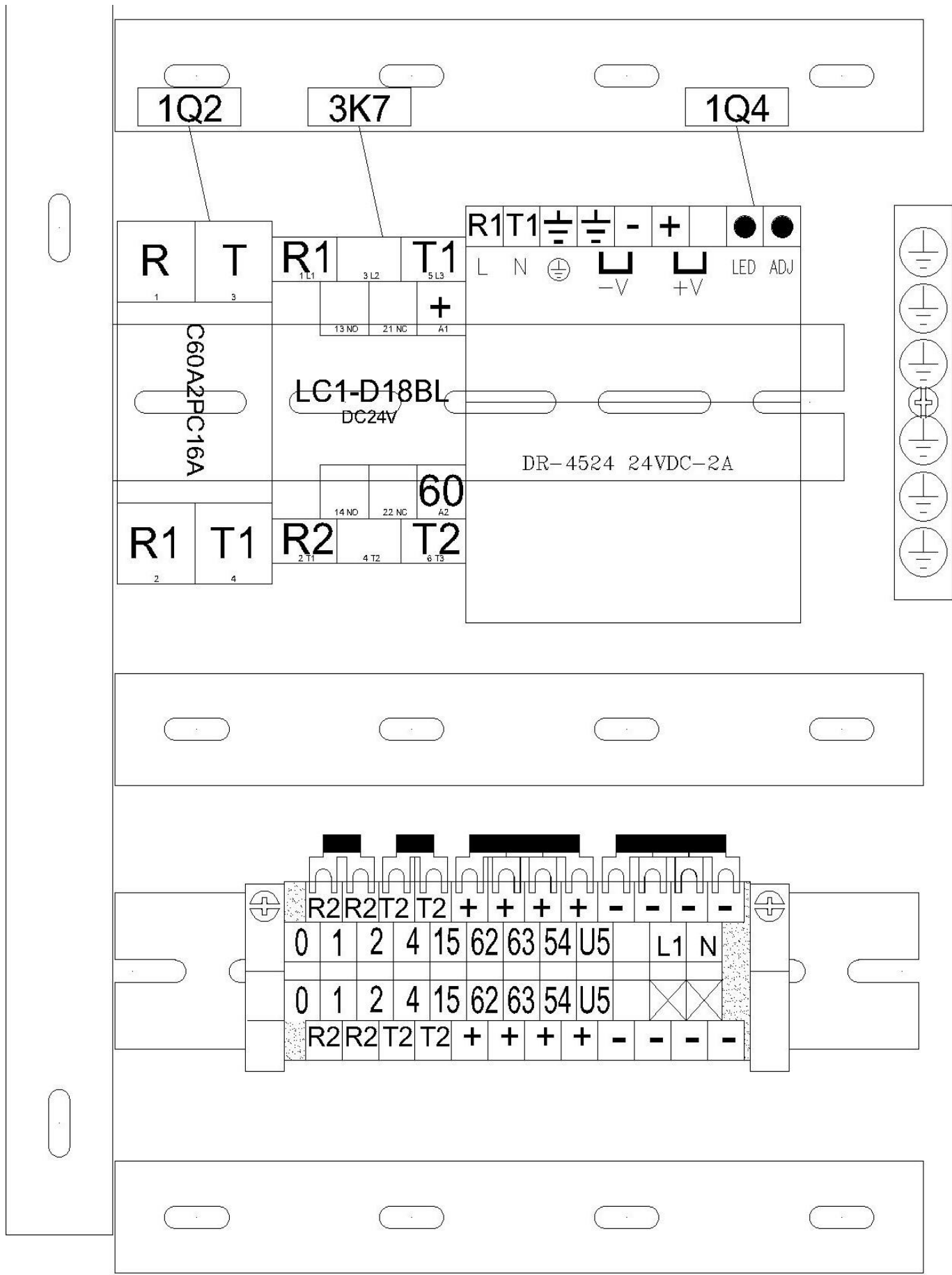
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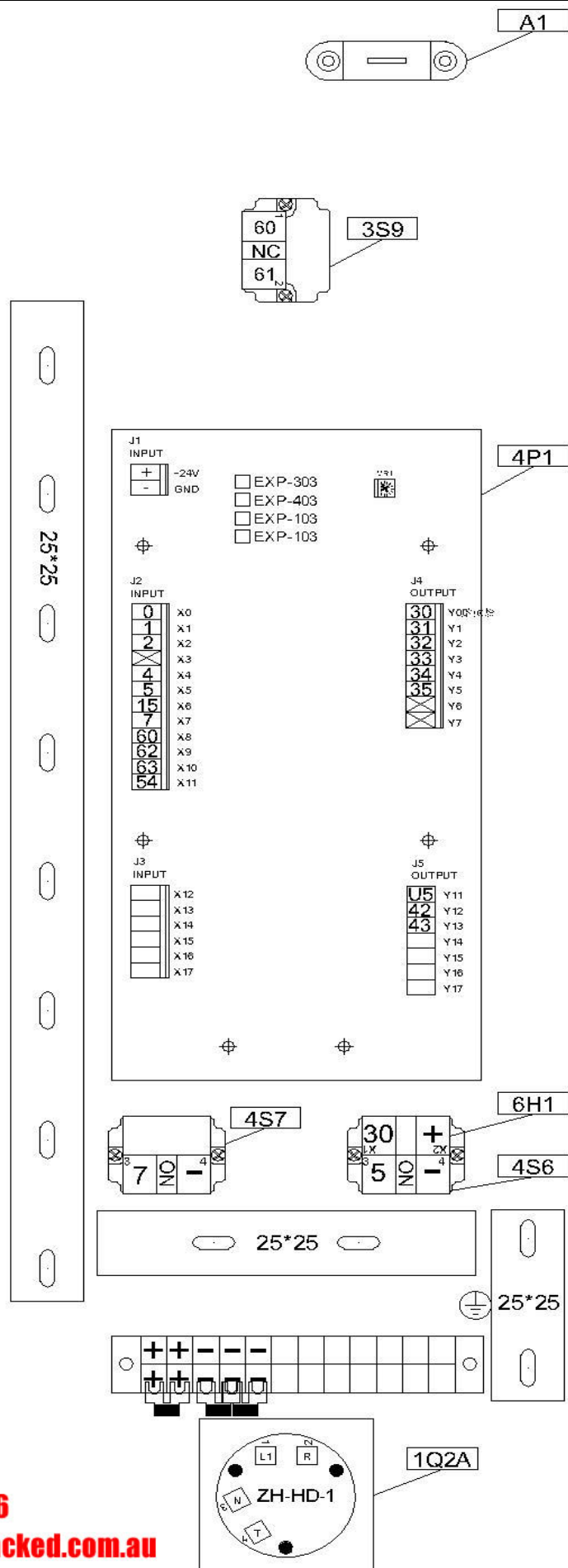
DRAW 1



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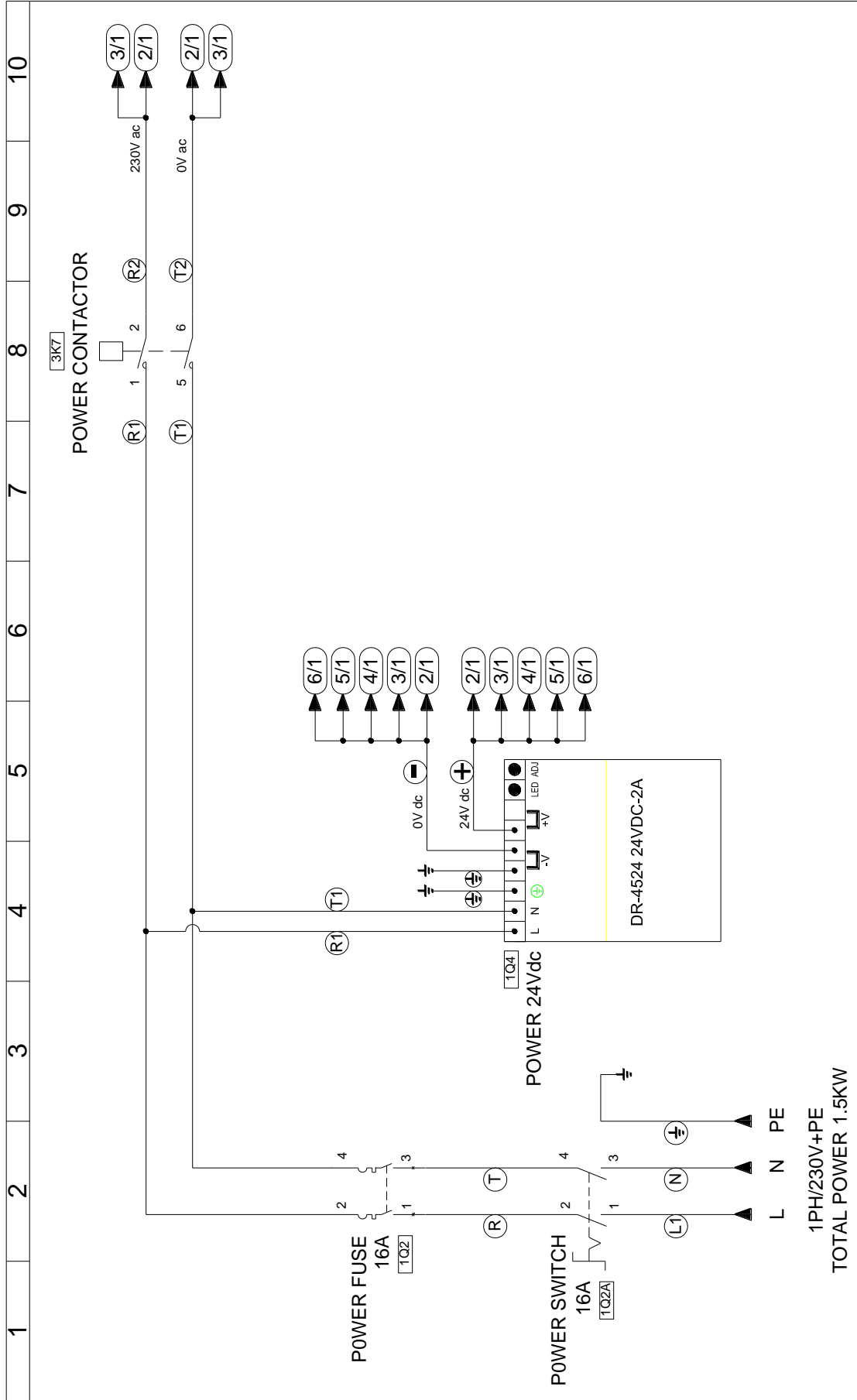


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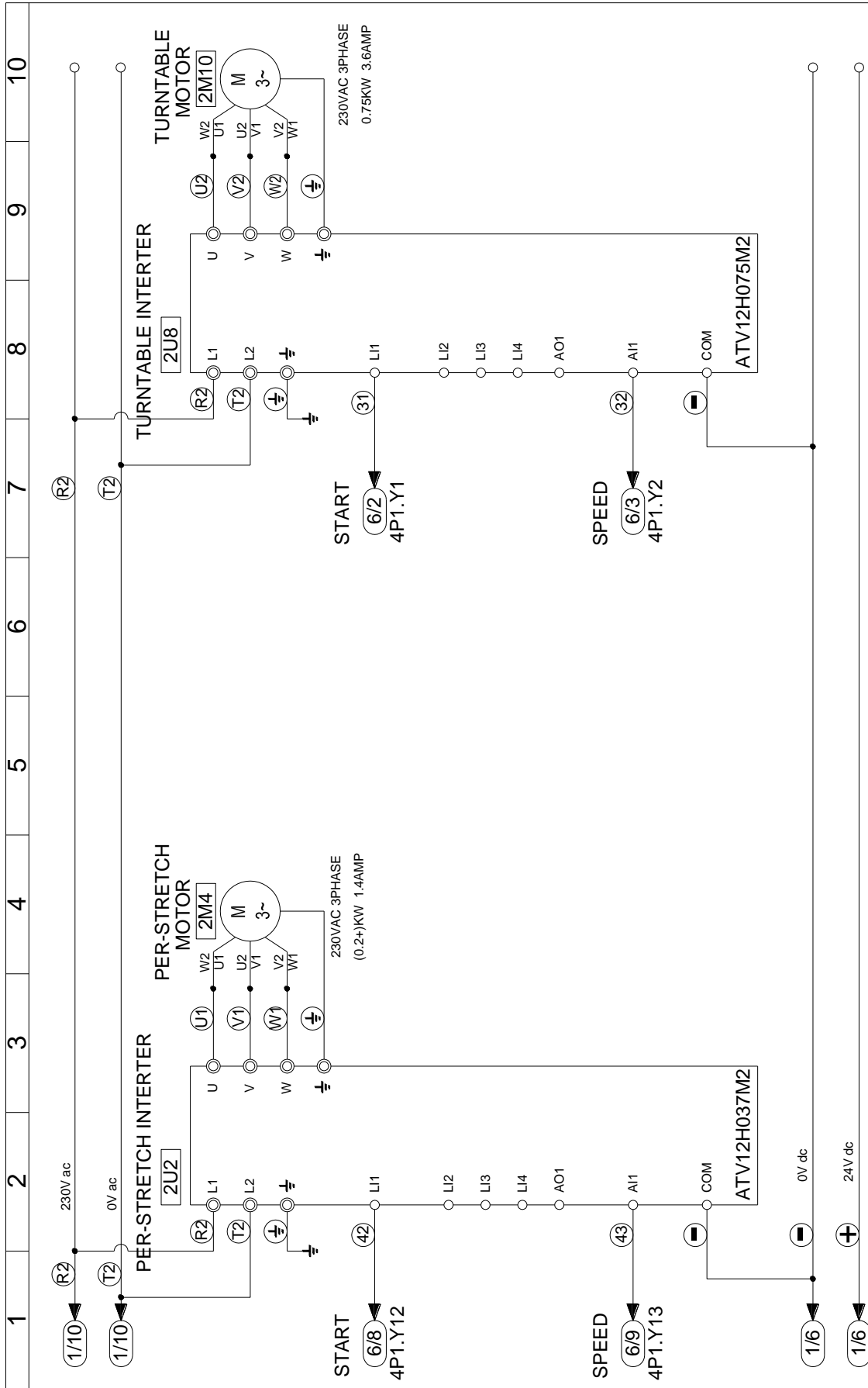
ELECTRIC PARTS LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
1Q2	P0305-010001200	POWER FUSE (IK60N2PC16A)	1
1Q2A	P0311-010002800	POWER SWITCH (ZH-HD-48-BY)	1
1Q4	P0307-010000400	POWER 24VDC (DR-4524 24VDC-2A)	1
2U2	P0315-010000300	PRE-STRETCH INVERTER INVERTER, ATV12H037M2, 220V	1
	P0315-010000200	INVERTER, ATV12H037F1, 1/2HP, 110V	1
2U8	P0315-010000100	TURNTABLE INVERTER INVERTER, ATV12H075M2, 1HP, 220V	1
	P0315-010002100	INVERTER, ATV12H075F1, 1HP, 110V	1
3U2	P0315-010000300	CARRIAGE INVERTER INVERTER, ATV12H037M2, 1/2HP, 220V	1
	P0315-010000200	INVERTER, ATV12H037F1, 1/2HP, 110V	1
3K7	P0306-010000400	POWER CONTACTOR (LC1D18BL, DC24V)	1
3S9	P0313-010006300	EMERGENCY STOP: XA2ES542	1
3S9A	P0311-020000100	CARRIAGE BOX DOOR SWITCH (TZ-93BPG)	1
4P1	P0309-010008200	MICROPROCESSOR CARD	
4S6	P0313-010006400	START BUTTON GREEN: XA2EW33B1	1
4S7	P0313-010006900	STOP BUTTON: XA2EA41	1
A1	P0311-030000100	CARRIAGE BOX DOOR KEY (TZ93-K3)	1
B1	P1002-0006800	PANEL LABEL	1
B2	P1113-0001000	KNOB	1

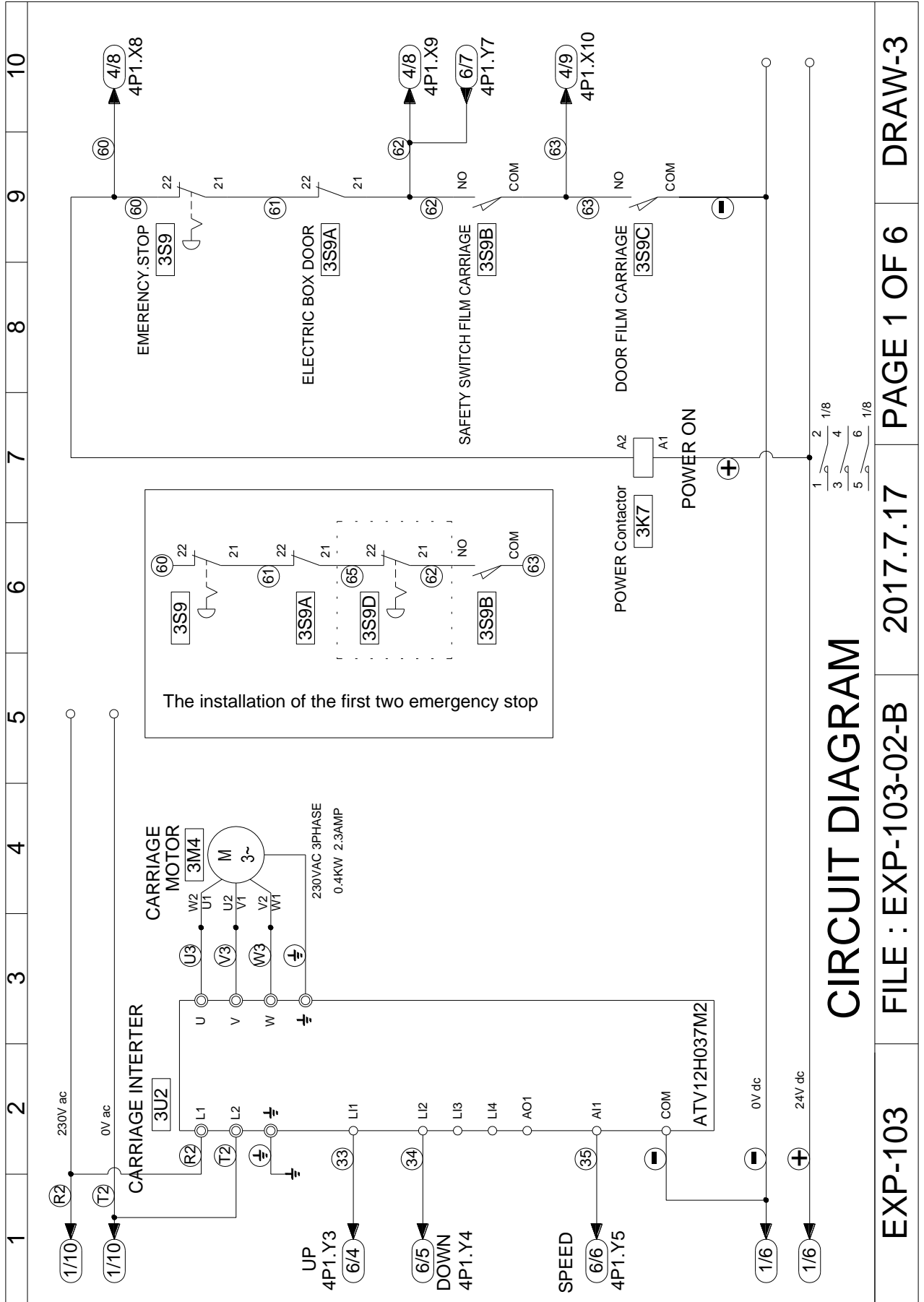




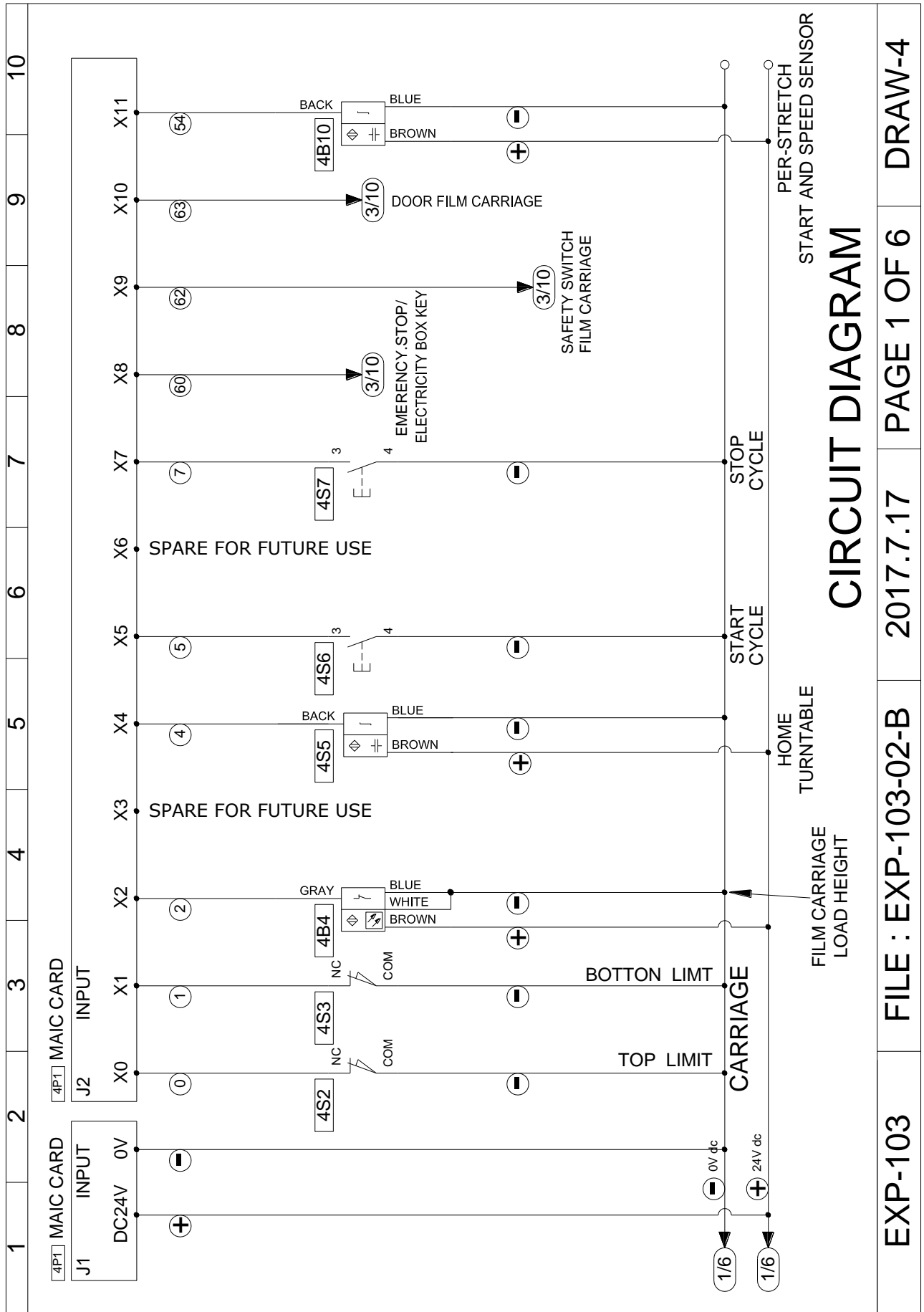
CIRCUIT DIAGRAM



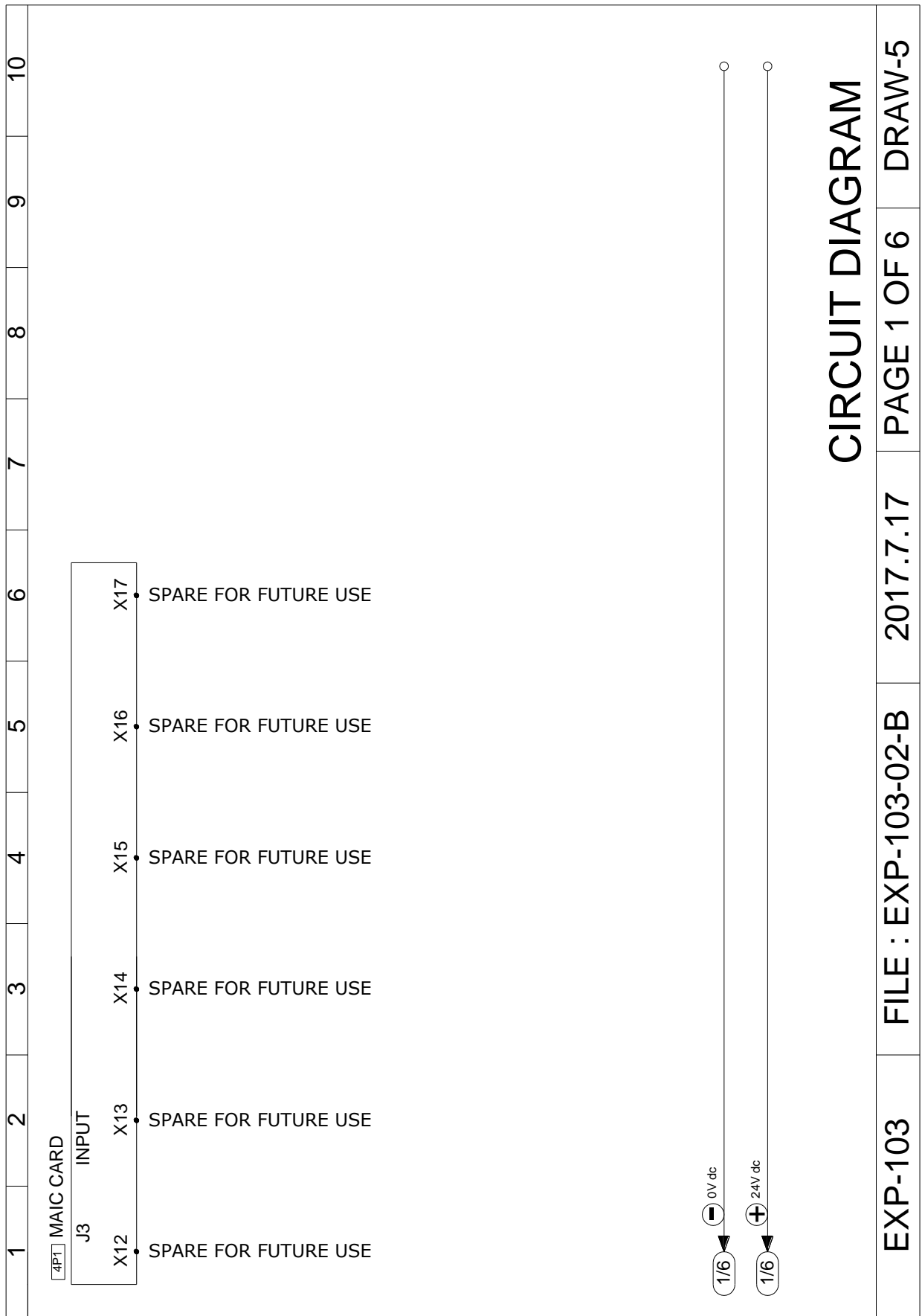
CIRCUIT DIAGRAM



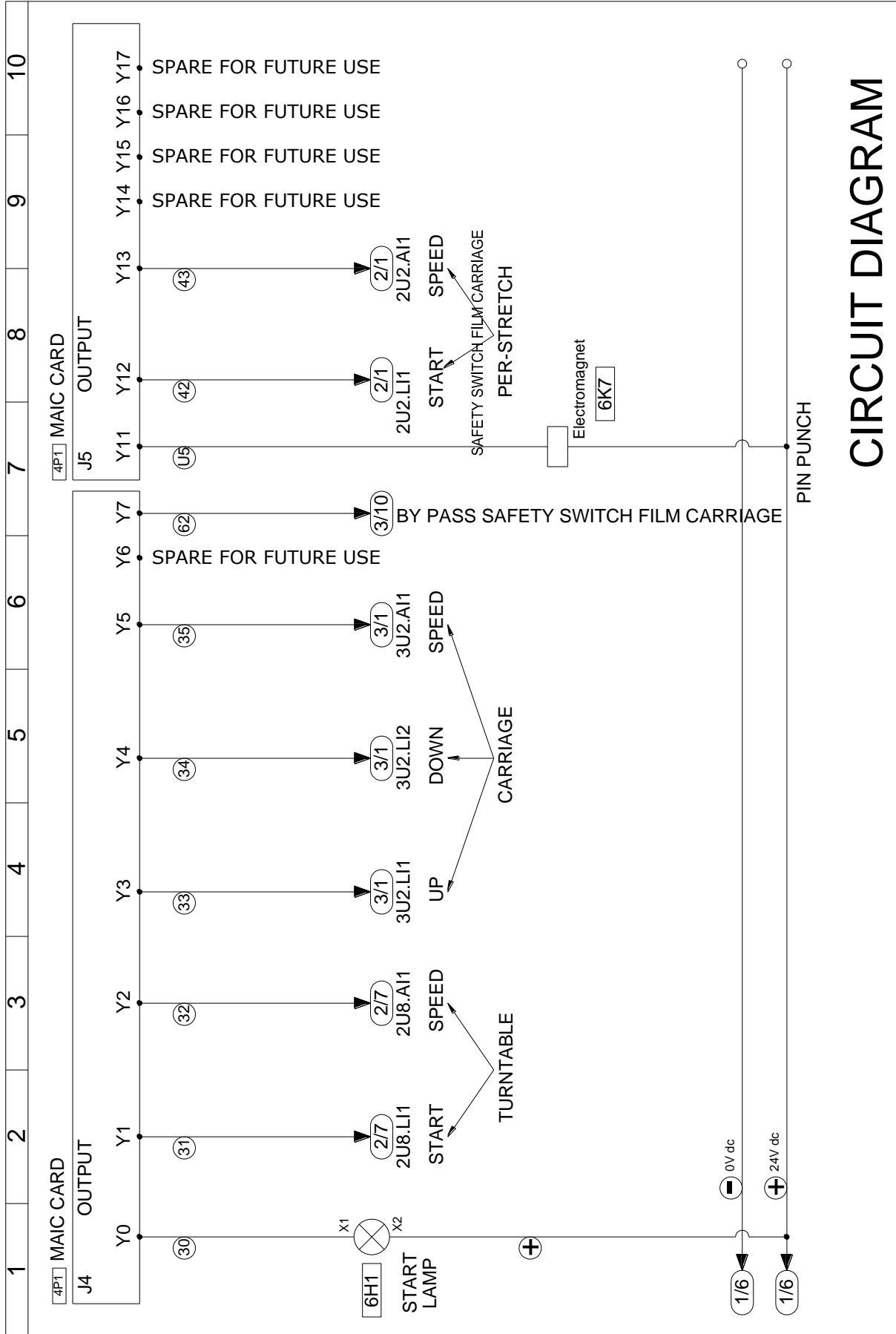
CIRCUIT DIAGRAM



CIRCUIT DIAGRAM



CIRCUIT DIAGRAM



CIRCUIT DIAGRAM

5. TROUBLE SHOOTING

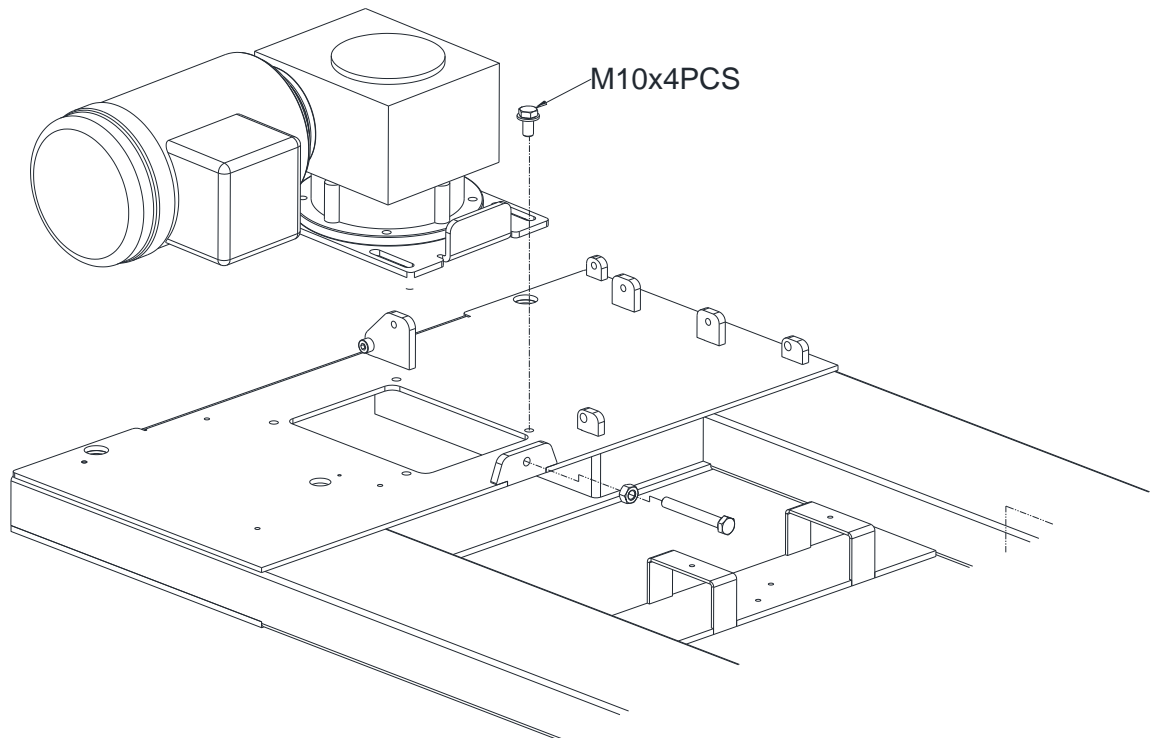
5.1 GENERAL ADJUSTMENT

1) Turntable belt adjust

Please see the illustration 5-1, and then loosen the motor seat M10 screw 4 pcs.

Turn the (M10) on the seat until get enough tension. Turn and tight the motor seat screw 4 pcs again.

Adjust the M10 screw (Up and down) to proper tension



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5.2 TROUBLE SHOOTING WITH EXP-103 MACHINE

Error Code	Cause	Description	Solution
Er0	X8=OFF X9=ON	1.EMG BUTTON 2.CONTROL BOX POWER CUT SWITCH	Exam if EMG Switch is locked. Release switch. Check if EMG Switch is faulty. Check if Control box Power Cut switch is faulty.
Er1	Trouble shoot	Film Brake	Re-apply film to the machine, and press start to continue cycle. Check if the sensor if faulty.
Er3	N/A		
Er4	X9=OFF X10=ON	Carriage Safety Pedal	Exam if Carriage foot pedal is blocked for foreign object. Check if the safety pedal switch is faulty.
Er5	X10=OFF	Carriage Safety Door.	Exam if Carriage safety door is open. Check if the safety switch is faulty.
Er7	X7=ON	Stop Button	Check stop button.

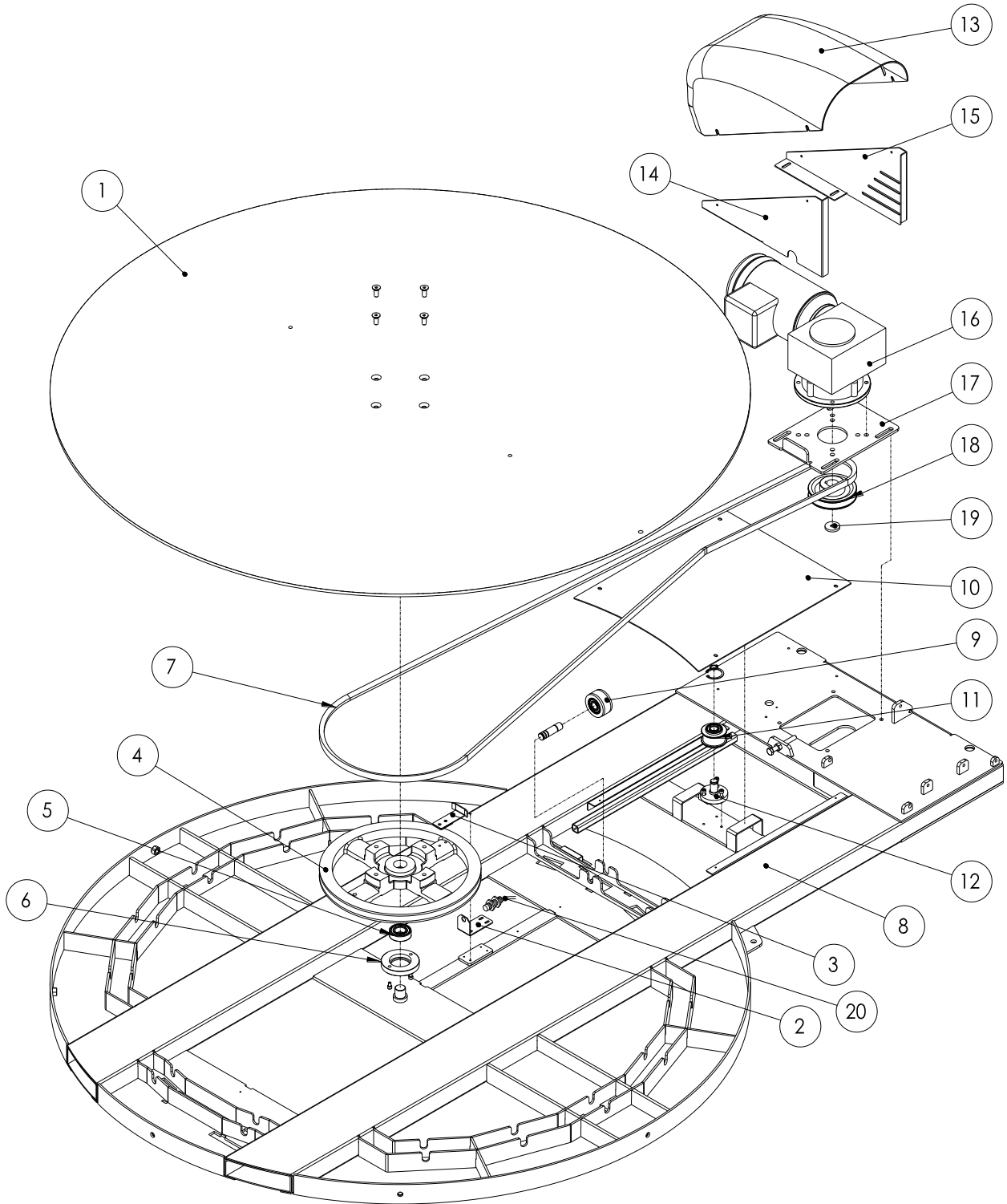


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6. PART LIST

6.1 SEAT



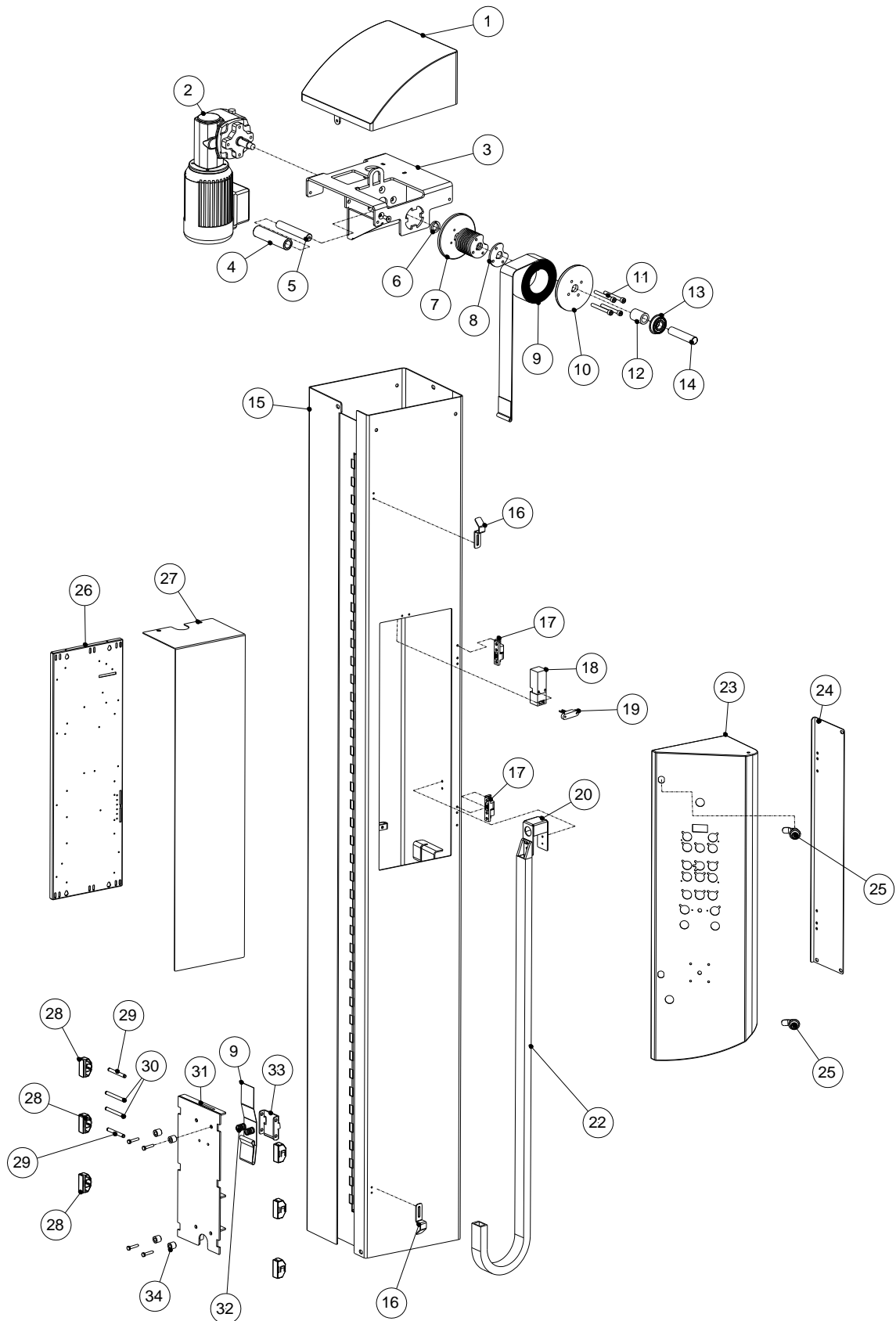
6.1 SEAT PART LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
1	P01-000081A	TURNTABLE 1.5M	1
	P01-000080A	TURNTABLE 1.65M	1
2	P01-046960A	SENSOR SEAT	1
3	P01-0469700	SENSOR PLATE	1
4	P0703-0001900	PULLEY	1
5	P1104-026205ZZ0	BEARING 6205ZZ(CWB)	1
6	P02-0050000	BEARING SEAT	1
7	P0902-0008300	BELT BX-139	1
	P0902-0007400	BELT BX-144	1
8	P01-045120B	TURNTABLE BASE 1.5M	1
	P01-044540A	TURNTABLE BASE 1.65M	1
9	P06-0003410	SUPPORTING WHEEL	13
	P02-000700A	SUPPORTING WHEEL SHAFT	
10	P01-045160A	COVER PLATE	1
11	P06-0028800	BELT BEARING PULLY SEAT	1
12	P02-0052400	BELT BEARING PULLY SHAFT	
13	P06-0048200	MOTOR COVER	1
14	P01-0448300	MOTOR COVER SUPPORT FRAME	1
15	P01-0448400	MOTOR COVER SUPPORT FRAME	1
16	P0503-0008800	TURNTABLE MOTOR, 1HP 3-PH, 220V/380V	1
17	P01-0445500	MOTOR BASE PLATE	1
18	P0703-0002000	MOTOR BELT PULLY	1
19	P01-0066100	WASHER M8	1
20	P0319-10P10316	PROX SWITCH PM12-04N	1



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6.2 TOWER



6.2 TOWER PART LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
1	P01-0451800	MASTER COVER	1
2	P0503-0008500	TOWER MOTOR, 1/2HP, 3-PH, 220V	1
3	P01-044580B	MOTOR BASE SEAT	1
4	P06-004850A	BELT TURNING SHAFT	1
5	P02-028960A	BELT TURNING SHAFT	1
6	P02-0277600	SHAFT SLEVE	1
7	P02-0278800	PULLEY PLATE	1
8	P02-0279000	BELT PULLEY	1
9	P0902-0006300	CARRIAGE BELT – 2.2M WRAP HEIGHT	1
	P0902-0007200	CARRIAGE BELT – 2.6M WRAP HEIGHT	1
	P0902-0007700	CARRIAGE BELT – 3.0M WRAP HEIGHT	1
10	P02-0278900	PULLEY PLATE	1
11	P1101-0506070AN	SCREW 6x70L	4
12	P06-0053000	SHAFT BUSHING	1
13	P1104-026204ZZ0	BEARING 6204ZZ	1
14	P02-0289700	MOTOR SHAFT	1
15	P01-022610C	TOWER – 2.2M	1
	P01-045000C	TOWER – 2.6M	1
	P01-0455800	TOWER – 3.0M	1
16	P01-0448500	LIMIT PLATE	2
17	P1110-020000400	HINGE	2
18	P0311-020000100	POWER SWITCH TZ-93BPG	1
19	P0311-030000100	KEY TZ93-K3	1
20	P01-0447400	CABLE BRACKET	1
22	P0316-070000200	CABLE, 1Bx40	1
23	P01-044870D	CONTROL PANEL – MAIN FRAME	1
24	P01-0446700	CONTROL PANEL – SIDE FRAME	1
25	P1118-010000200	LOCK C-403*3/4"	2
	P1118-020000100	KEY	
	P1118-030000100	LOCK PLATE	
26	P01-0226600	WIRING PLATE	1
27	P06-004840A	WIRING PROTECTING PLATE(220V)	1
	P06-0048410	WIRING PROTECTING PLATE(110V)	

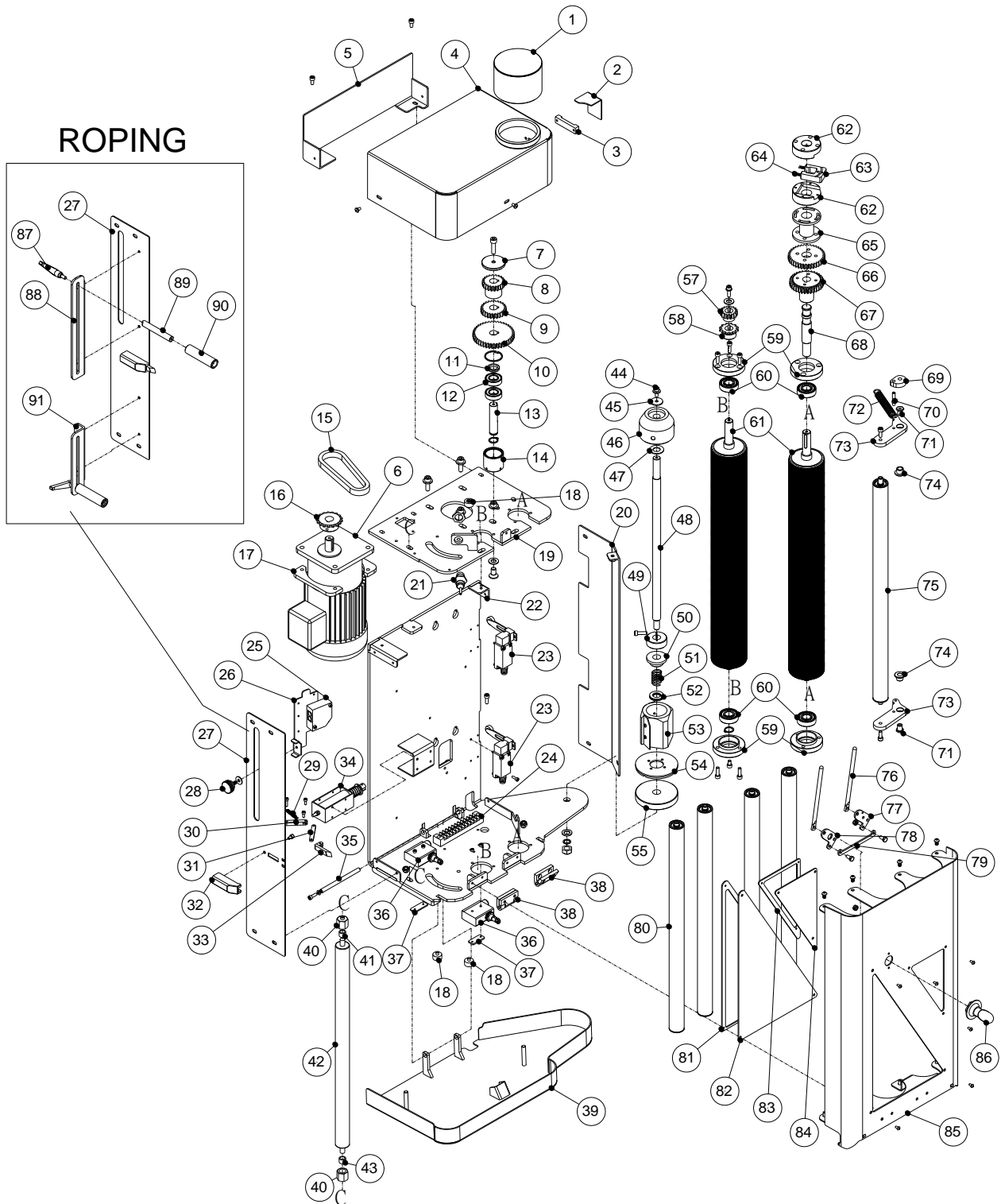
6.2 TOWER PART LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
28	P06-004730A	SLIDING BLOCK	6
29	P02-0289800	BELT FIXING SHAFT	2
30	P02-0289900	HOOK FIXING SHAFT	2
31	P01-045310A	SLIDING CART	1
32	P1201-000850A	SPRING	2
33	P01-0446600	ANTI-FALLING HOOK	1
34	P02-0292400	BUSHING	4



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6.3 CARRIAGE



6.3 CARRIAGE PART LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
1	P01-0449400	TENSION ADJUSTMENT COVER	1
2	P06-0049500	TENSION INDICATOR PLATE	1
3	P06-004900A	PLATE BRACKET	1
4	P01-0449300	CARRIAGE FRAME – COVER	1
5	P01-0448200	CARRIAGE FRAME – COVER BASE	1
6	P0501-0002800	CARRIAGE MOTOR 1/4HP, 3-PH, 220V	1
7	P06-0049100	LIMIT PLATE	1
8	P06-0049200	SPROCKET 22T→230% &300%	1
	P06-0051500	SPROCKET 23T→200% &250%	1
9	P06-0049300	SPROCKET 25T→230% &300%	1
	P06-0052500	SPROCKET 26T→200% &250%	1
10	P06-0051000	SPROCKET 42T	1
11	P02-0002000	WASHER	1
12	P1104-026003ZZ0	BEARING 6003ZZ	2
13	P02-0291300	SPROCKET SHAFT	1
14	P02-029120B	BUSHING	1
15	P0901-0001700	CHAIN #35x36	1
16	P0702-0001000	CHAIN SPROCKET 17T	1
17	P01-0007200	ADJUSTING PLATE	2
18	P06-004980A	BUFFER RING	4
19	P01-0452700	CARRIAGE FRAME – TOP SEAT	1
20	P01-044920A	CARRIAGE FRAME – REAR PANEL	1
21	P0302-010001600	PROX SWITCH XS4-P18-AB110	1
22	P01-044880D	CARRIAGE FRAME – BASE	1
23	P0311-060001100	LIMIT SWITCH VL-8108	2
24	P0304-010005600	CONNECTOR HOUSE 12P, 15A	1
25	P0302-020000200	PHOTO SENSOR A3R-2MX	1
26	P01-044590B	PHOTO SENSOR SEAT	1
27	P01-044890C	CARRIAGE FRAME FRONT PANEL	1
	P01-045490A	CARRIAGE FRAME FRONT PANEL(ROPING)	
28	P1113-0000400	KNOB M6*16L	1
29	P1202-0010400	PIN PUNCH SPRING	1

6.3 CARRIAGE PART LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
30	P02-029180A	PIN PUNCH JOINT	1
31	P01-0449500	PIN PUNCH LINKAGE	1
32	P02-0291000	PIN PUNCH SEAT	1
33	P02-029110A	PIN PUNCH	1
34	P0301-0000300	SOLENOID SH-1585 DC24V)	1
35	P02-0289400	SAFETY PEDAL ROTATING SHAFT	1
36	P0311-060001400	LIMIT SWITCH ML-7312	2
37	P01-0006700	HOLDING PLATE	2
38	P1110-020000500	HINGE CL-208-3	2
	P02-000330A	NUT	4
39	P01-044900A	CARRIAGE SAFETY PEADL	1
40	P02-0004200	BEARING SEAT	2
41	P1104-05HK10100	BEARING HK1010	1
42	P08-0007900	ONE WAY ROLLER ASSEMBLY	1
43	P1104-17HF10120	BEARING HK 1012	1
44	P1101-0906016AN	SCREW M6*16L	1
45	P01-0003700	RING	1
46	P06-0000900	RING (UPPER)	1
47	P01-0005500	RING	1
48	P02-0002800	FILM SEAT SHAFT	1
49	P02-0015700	ADJUSTING RING	1
50	P06-0006100	RING (LOWER)	1
51	P1201-0000710	SPRING	1
52	P1104-19AS17301	BEARING NTB1730	1
53	P06-000600A	FILM FIX SEAT	1
54	P02-0014800	BRAKE DISC	1
55	P02-0003000	FRICTION SEAT	1
57	P0701-0007600	SPROCKET 16T	1
58	P0702-0000500	SPROCKET 12T	1
59	P02-028910A	BEARING SEAT	4
60	P1104-026203ZZ0	BEARING 6203ZZ(CWB)	4
61	P08-000021A	STRETCH ROLLER	2
62	P06-0005500	HANDLE	2

6.3 CARRIAGE PART LIST FOR EXP-103

KEY NO	PART NO	DESCRIPTION	Q'TY
63	P06-0005400	SAFETY BUTTON	1
64	P1201-0000600	SPRING	2
65	P06-0005300	GEAR PULL WHEEL	1
66	P0701-0007400	SPROCKET 37T→230% &300%	1
	P0701-0007700	SPROCKET 36T→200% &250%	1
67	P0701-000750B	SPROCKET 34T→230% &300%	1
	P0701-000780B	SPROCKET 33T→200% &250%	1
68	P02-029140A	SPROCKET SHAFT	1
69	P01-0447000	PRE-STRETCH SENSOR BLOCK	1
70	P02-029200A	SENSOR BLOCK SHAFT	1
71	P02-0005000	DANCING BAR SHAFT	2
72	P1202-0010300	DANCING BAR SPRING	1
73	P01-0447100	DANCING BAR ARM	2
74	P02-0291600	BUSHING 14x12x10L	2
75	P08-000800B	ROLLER	1
76	P02-0003700	DOOR BOLT	2
77	P01-0447900	DOOR BOLT SEAT	1
78	P01-0448100	DOOR BOLT SEAT	1
79	P01-0448000	DOOR BOLT CONNECTOR	1
80	P08-0008100	ROLLER	4
81	P01-0447800	DOOR PRESSING PLATE (L)	1
82	P06-0049700	ACRYLIC DOOR (LARGE)	1
83	P01-0447700	DOOR PRESSRING PLATE (S)	1
84	P06-0049600	ACRYLIC DOOR (SMALL)	1
85	P01-044760A	CARRIAGE FRAME – DOOR	1
86	P1112-0001200	HANDLE BAR	1
87	P1112-0001100	HANDLE	2
88	P01-0455100	ROPING FINGER TRACK(L)	1
89	P02-0295000	ROPING FINGER SHAFT	2
90	P06-0052000	ROPING FINGER	2
91	P01-0455000	ROPING FINGER TRACK (S)	1