



PALLET STRETCH WRAPPING MACHINE

MODEL: EXP-108W

OPERATION MANUAL

980326

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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 elevator 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

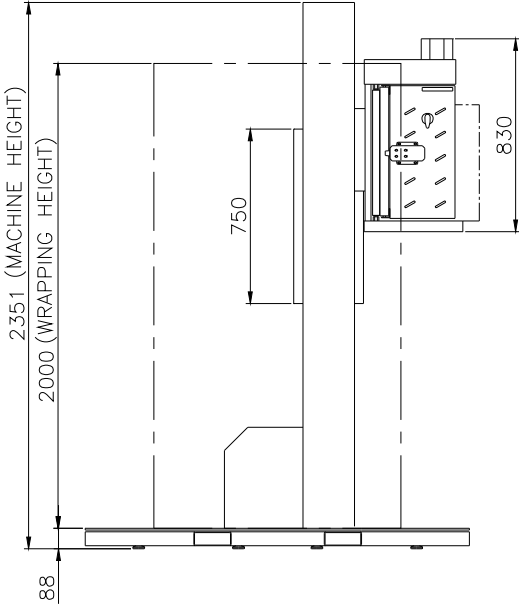
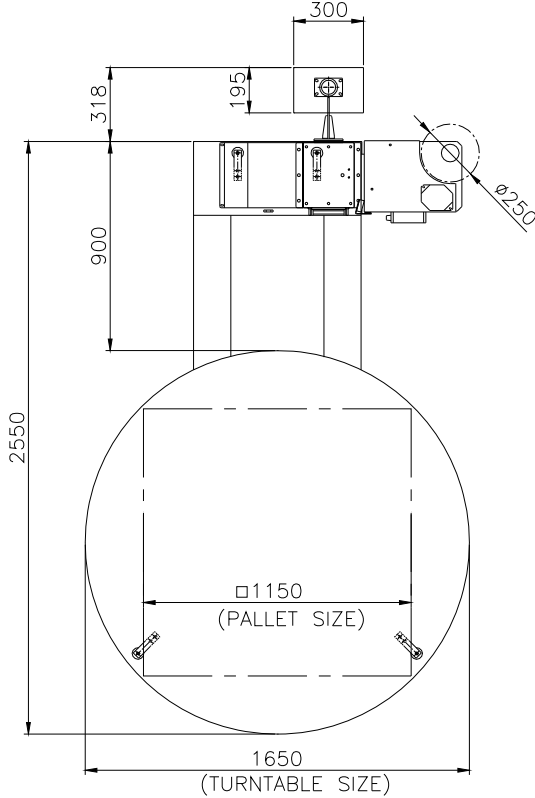
2.1 SPEC. TABLE

Model	EXP-108W
Turntable Speed	0 –12 RPM
Turntable dia.	1650mm
Max wrapping height	2000mm
Max wrapping size	1150x1150mm
Max loading weight	1650kgs
Film stretch (%)	300% & 230% two step change by handle (250% and 200% option)
Film tension	Adjustable
Elevator Unit speed	Adjustable
Max. film spec.	⌀ 250x500mm
Turntable height	82mm
Ramp (slope) spec.	1165x1000mm
Machine size	2550x1650x2345mm
Machine net weight	516kg

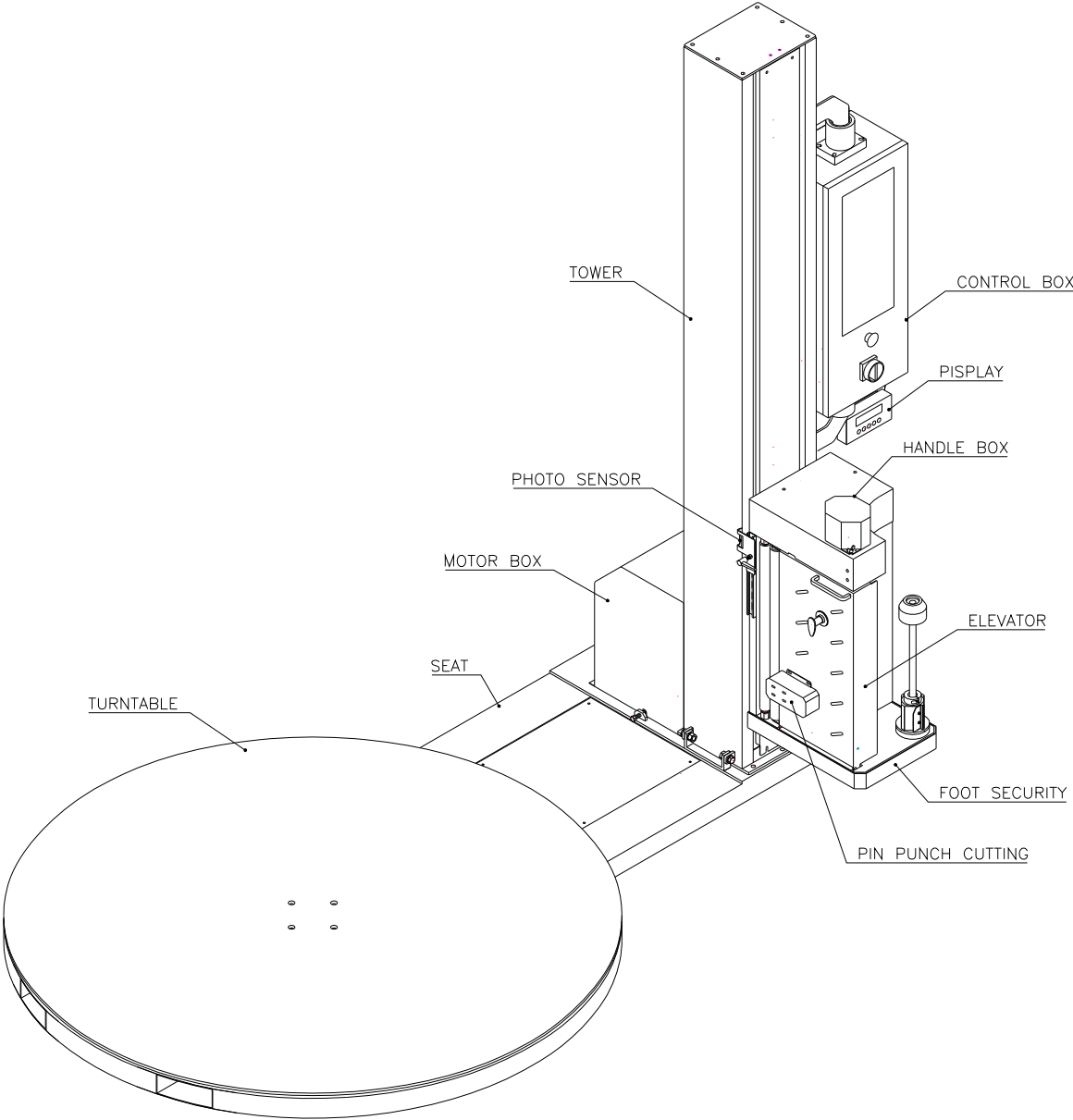
Standard option:

- ❖ 2.5 & 3.0 meters wrapping height
- ❖ Top pressure plate driven by motor
- ❖ Ramp

2.2 MACHINE DIMENSION



2.3 MACHINE DESCRIPTION



3. OPERATION DESCRIPTION

3.1 INSTALLMENT

- 1) Apart all the wooden package. Avoid damaging the machine.
- 2) Move the machine to an installment position by fork lift.
- 3) Lift up the tower.
- 4) Fix and tighten the tower by M10 screws.
- 5) Connect the sensor wires.
Proximity Switch: +,-,4.
Motor for Elevator: U3,V3,W3.
- 6) Install the motor's cover.
- 7) Install the motor's cover.
- 8) Use forklift to lift up the machine, and fix the M12 adjusted leg screws into the loadcells.
- 9) Place the machine on the ground and adjust the height of 4 * M12 adjusted leg screws to make the turntable to be level. At the same time to keep at least 20mm between the bottom line of the bottom unit and the ground.
- 10) Once finished the adjustment of the level, please check again if 4 * M12 adjusted leg screws is contacted with floor surface, then tight the M12 nut to fix.
- 11) Connect the power cable with the socket by a 110V/220V power.

3.2 REMINDER OF INSTALLATION

There are some issues operators need to pay attention on:

Tower Installation

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

Control Panel Installation

Engineers must make sure the bottom-supporting arm is installed properly to the tower with four screws and carefully fitted the tower on to the bottom-supporting arm then installed the top-supporting arm, on top of the Control Panel. After the installation is done, make sure, the Control Panel is 180 degree turnable.

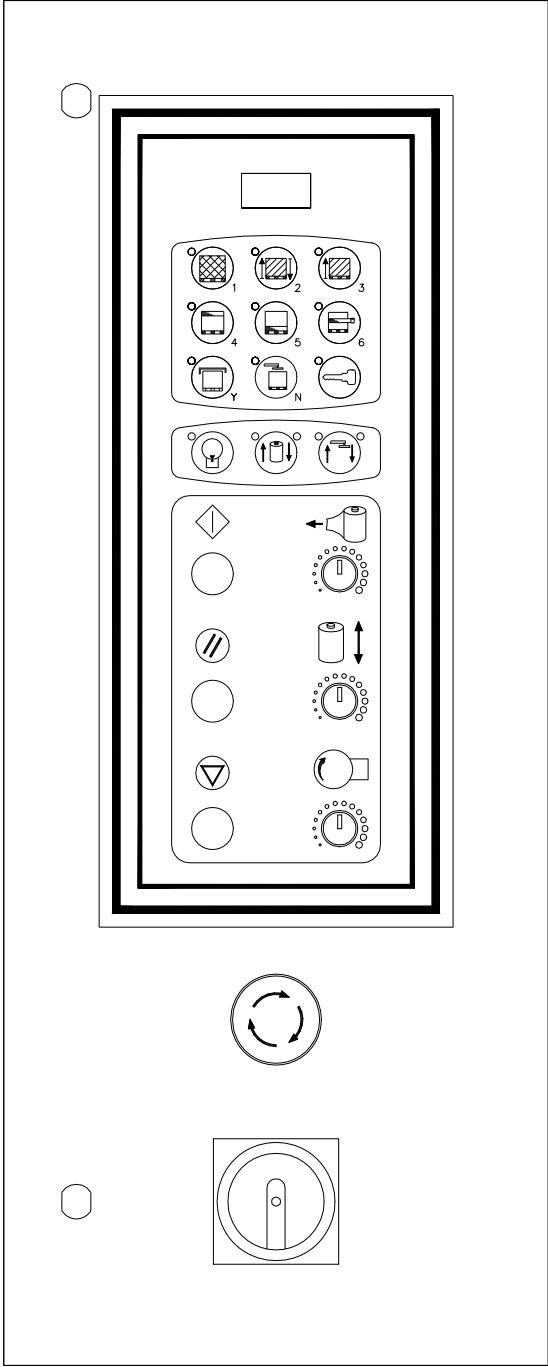
Control Wires and Connections

On the bottom side of the Control Panel, there is one black tube, with wires inside; carefully clipped the tube to clips on the tower and follow all the way down to the machine base.

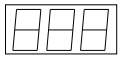
Motor Cover

After all the connections are complete, please carefully install the motor cover to cover up all the wire connections and the motor on the base of the machines.

3.3 OPERATION OF CONTROL PANEL



3.4 OPERATION DESCRIPTION



Screen Reader

Screen shows “**S**” : means “ Manual Operation”

Screen shows “ **ErO**” means “ Emerge Stop”

Screen shows “ **Er1**” means “ Film Breaking”

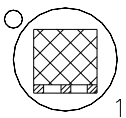
Screen shows “ **A**” means “ Program A”

Screen shows “ **B**” means “ Program B”

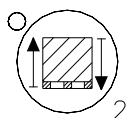
Screen shows “ **C**” means “ Program C”

PROGRAM BUTTONS A, B & C

These buttons are for programs setting and selections:

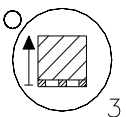


Program A. This button is already pre-program to run the machine with spiral up and spiral down wrapping cycle.

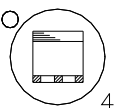


Program B This buttons are pre-program for spiral up and spiral down. The first stage is for Spiral up, then the machine will pin punch the film and stopped.

The second stage is for spiral down and the machine will pin punch the film and stopped. But, before the machine start to run, the operator must press the green button to start.

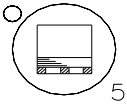


Program C This button is for spiral up, after the machine pin punch the film, the elevator will return back to the starting position.



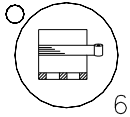
WRAP CNT. (TOP & BOTTOM) BUTTON, REINFORCEMENT

Press this button to select the number of top wrapping count from 0 to 9 first, then set up the bottom wrapping count from 0 to 9 as well.



WRAP CNT. (TOP & BOTTOM) BUTTON, REINFORCEMENT

Press this button to select the number of bottom count from 0 to 9 first,

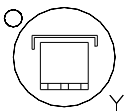


WRAP CNT. (MIDDLE), REINFORCEMENT

This button is for reinforcing specific area during wrapping process under manual program. Please follow the instruction:

1. Press ELEVATOR BUTTON and move the elevator to the lowest position.
2. Press Elevator Button again to move the Elevator up to the reinforced position.
3. Hold the Reinforced button till the wrapping counters are satisfied.

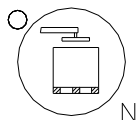
P.S. The wrapping counter are various according to operator's requirements.



TOP SHEET BUTTON

Selecting “Top Sheet” function means after elevator reach the top section; it will come down 200mm first and stop. Operators put the top sheet then press “ START” to let the wrapping goes up again and continue the unfinished wrapping cycles.

NOTE: When the program sets on the wrapping from top to bottom & one way only, operator should place the top sheet before hand.

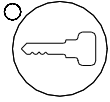


PRESSURE BUTTON

This is an OPTIONAL function only operate when machine install the pressure plate. There are 2 pressuring options available with this option.

Option A – After completing the wrapping cycle, the pressure plate goes up to the top position.

Option B – After completing the wrapping cycle, the pressure plate rises up and remains 500mm from the package.

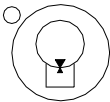


KEY BUTTON

After all of function setting, press this button to memory.

TURNTABLE BUTTON

It is the manual button for the turntable.

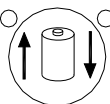


First, Pressing this button first. Light is on.

Second, Pressing the “START” button to operate the turntable.

Finally, Pressing the button again to stop the turntable. Light is off.

During the operation of elevator, operator also can press this button to control the turntable.



ELEVATOR BUTTON

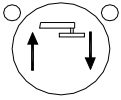
It is the manual button for Elevator. After pressing this button, either left or right lamp is on

When upper left lamp is on, the elevator will go up after pressing the “START”.

In contrast, when its upper right lamp is on, the elevator will come down after pressing the START.

To stop in any position simply press this button. Both lights will be off.

During the operation of turntable, operator can press this button to control the elevator.



PRESSUR UP/DOWN BUTTON

It is the manual button for pressure plate UP/DOWN

After pressing this button, either its left or right lamp is on. If its upper left lamp is on, after pressing the START the pressure plate will come up. In contrast, when its upper right lamp is on means after pressing the START the pressure plate will come down.



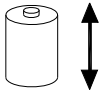
START BUTTON

Press this button to start operation.



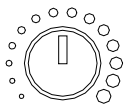
Note: After all of function been setting press this button to re start the program

ELEVATOR SPEED ADJUSTMENT



Turn the knob clockwise to increase the speed of elevator.

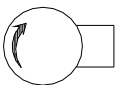
Turn the knob anticlockwise to decrease the speed of elevator.



The speed adjust knob is available for both “AUTO” and “MANU” program.

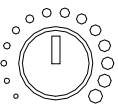
If there is no particular requirement, please set the knob on standard position.

TURNTABLE SPEED ADJUSTMENT



Turn the knob clockwise to increase the speed of turntable.

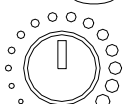
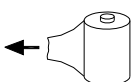
Turn the knob anticlockwise to decrease the speed of turntable.



The speed adjust knob is available for both “AUTO” and “MANU” program.

If there is no particular requirement, please set the knob on standard position. The turntable speed is 12 RPM.

FILM TENSION ADJUSTMENT



It is the control knob for wrapping tension.

Turn the knob clockwise to increase the tension.

Turn the knob anticlockwise to decrease the tension.

NOTE: 1) Turntable speed and wrap tension can be adjusted individually.

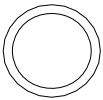
2) Wrapping tension on the package edge and side are the same

3) After setting the wrapping tension, it is suitable for any package and
no need to make adjustment.



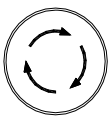
RESET BUTTON

Pressing the button, all operation is released and the machine returns to natural status.



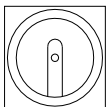
PAUSE BUTTON

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



EMG. STOP

Pressing this button to make emergency stop.



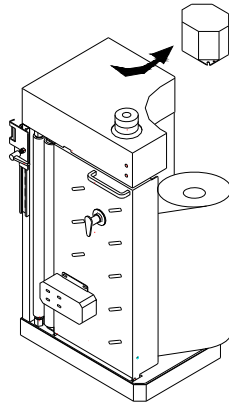
MAIN POWER

This is the main power cut switch.

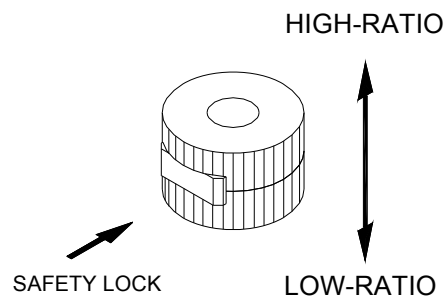
3.5 ELEVATOR UNIT

Pre- Stretch Percentage Change

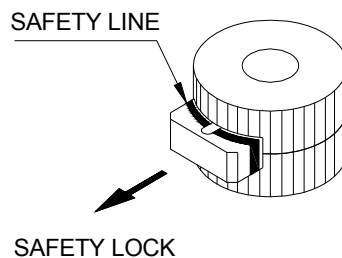
- 1) Switch the power off and apart the handle cover



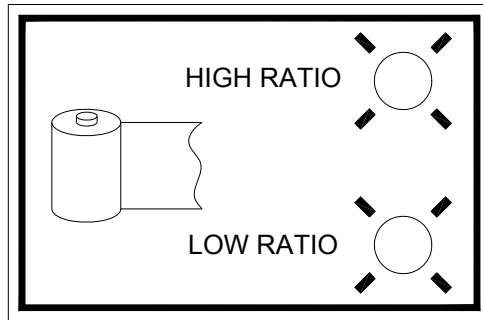
- 2) Push the safety lock inner, and then use the handle to adjust the pre-stretch percentage. Take up the handle to get the high pre – stretch percentage or put down to get the low pre – stretch.



- 3) To make sure a safe and correct operation, please check the below items:
 1. The mark line is back to its home position.



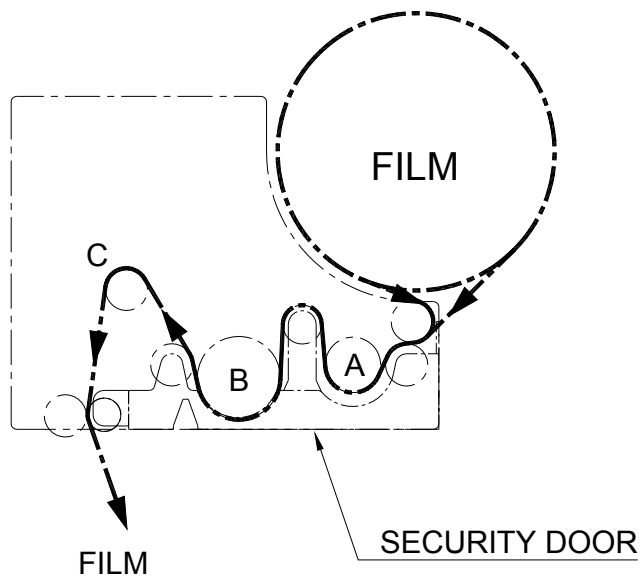
2. The lamp indicated the correct pre-stretch percentage



NOTE:) There are two sets of pre- stretch percentage, one is 300% & 230%, the other is 250% & 200%.

Illustration for film threading

1. OPEN THE SECURITY DOOR FIRST.
2. Make sure the film go through C roller.
3. CLOSE THE SECURITY DOOR



3.6 CALIBRATION SETUP DESCRIPTION

CALIBRATION SETUP MANUAL



A. There are 3 sections that need to be reset F8, F16, and F17.

Reset units F8: 1) Pound 2) Kilogram

Recommend to use Pound as a unit during reset procedure. When F21 reset the machine back to factory setting, then there is no need to rest F8.

F16 Set the machine to Zero (To set the machine back to zero, the machine surface must be clear without any pallet or packages and film roll need to be removed from carriage.)

Span Calibration F17 (Utilize the weight to correct)

F16 Rest to Zero

1. Reset switch, adjust the switch to left to enter (setup)



2. Press "Print" button to select F16.



3. Press "Zero" button to enter F16 mode for setting, this procedure require to turn the power off and on.



4. Press “Zero” again to set the machine back to zero.



5. Press “Set” button complete the process.



6. F16 Reset to zero complete.



Span Calibration F17 (Utilize the weight to correct)
This calibration weight is 1339 lbs.(F8 needs to establish as 1 lb)

1. Reset switch, adjust the switch to left to enter (setup)



2. Press "Print" button to select F17



3. Press "ZERO" button to enter F17 mode for setting, this procedure require turning the power off and on.



4. Press "Units" button to set up the decimal point.



5. Press "TARE" button to the tenth



6. Press "Units" button to set the tenth



7. Press "TARE" button to the hundredth



8. Press "Units" button to set the hundredth



9. Press "TARE" button to the thousandth



10. Press "Units" button to set the thousandth



11. Press "SET" to show End C1



12. Span Calibration end



B. If memory lost or Error occur

1. Please select F16 and F17 and write down the number figure on the display.
2. Please select F19 and input the number figure from F16 and select F20 and Insert the number figure from F17. After this procedure is done, there is no need to re-set the machine.

C. Switching Pound to Kilo on display

Press "Unit" button to change.



4. ELECTRICAL

4.1 ELECTRICAL CAPACITY

1) Power Consumption

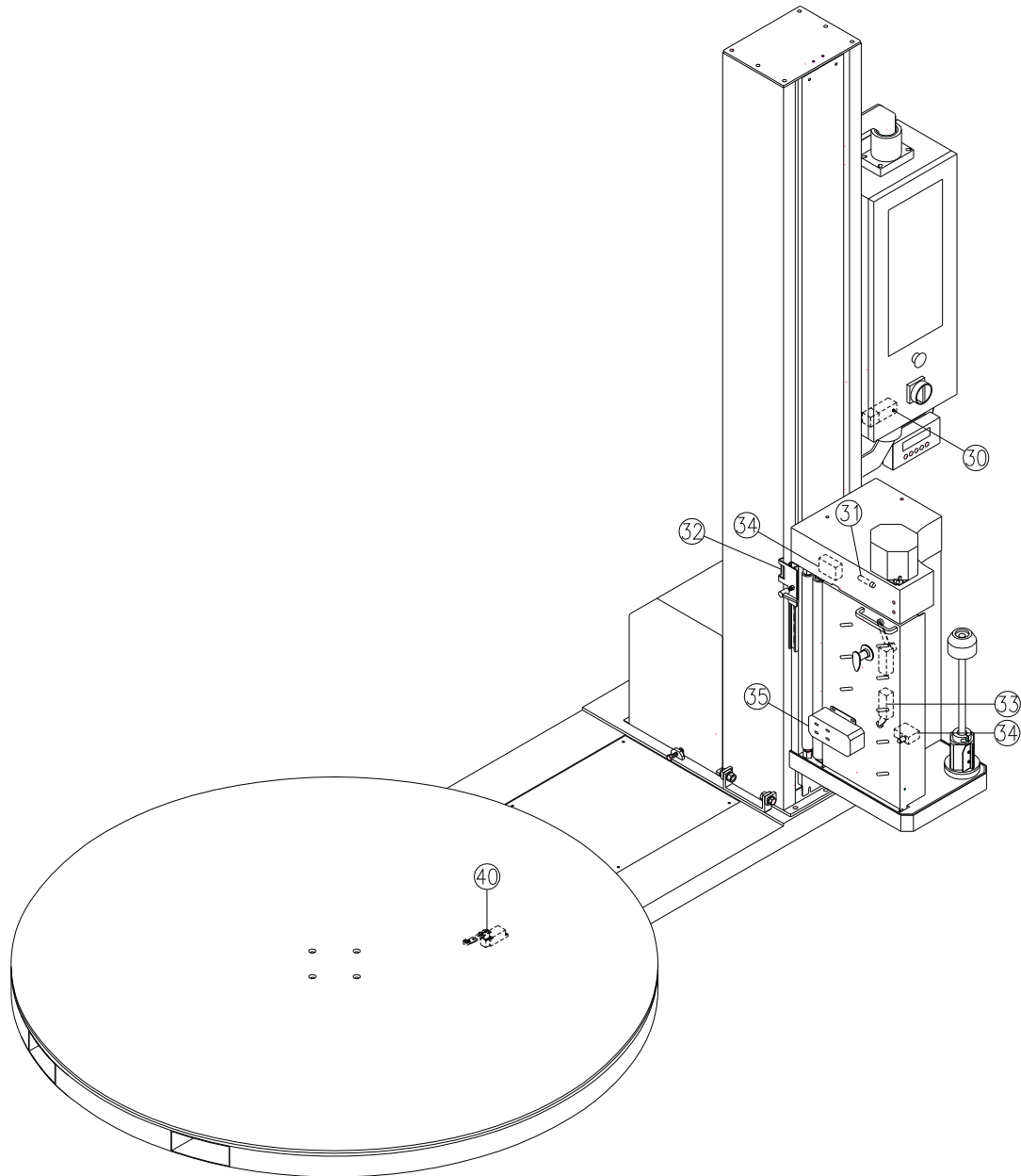
Pre-stretch motor	0.2 KW
Turntable motor	0.4 KW
Elevator Motor	0.4KW
Control & wiring box	DC 24V 50W
Machine Power Use	1.05 KW
Power Socket need	1.2 KW

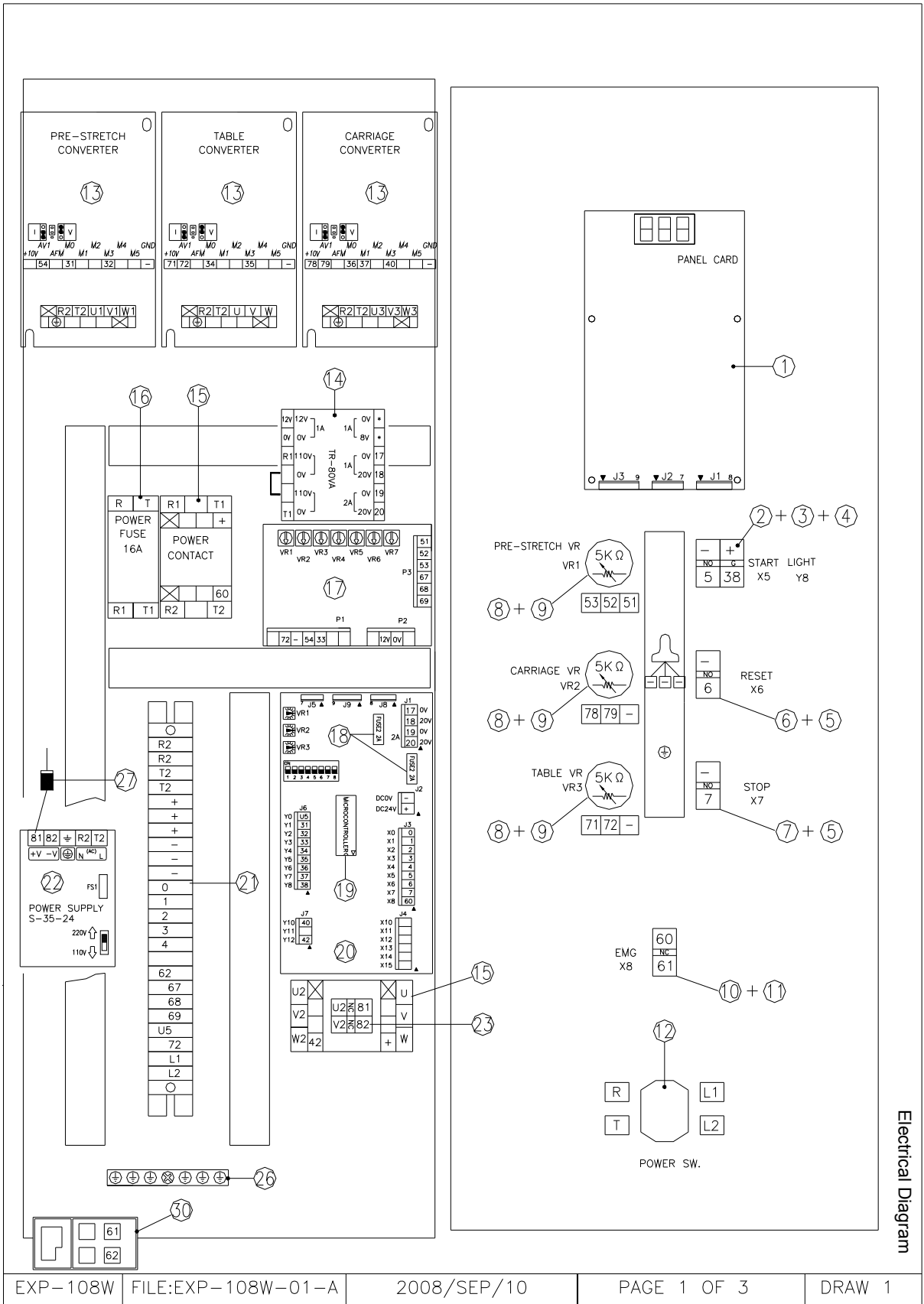
2) Power Cable ----- 1.25 mm²

3) Machine input ----- 110V / 220V 1-PHASE

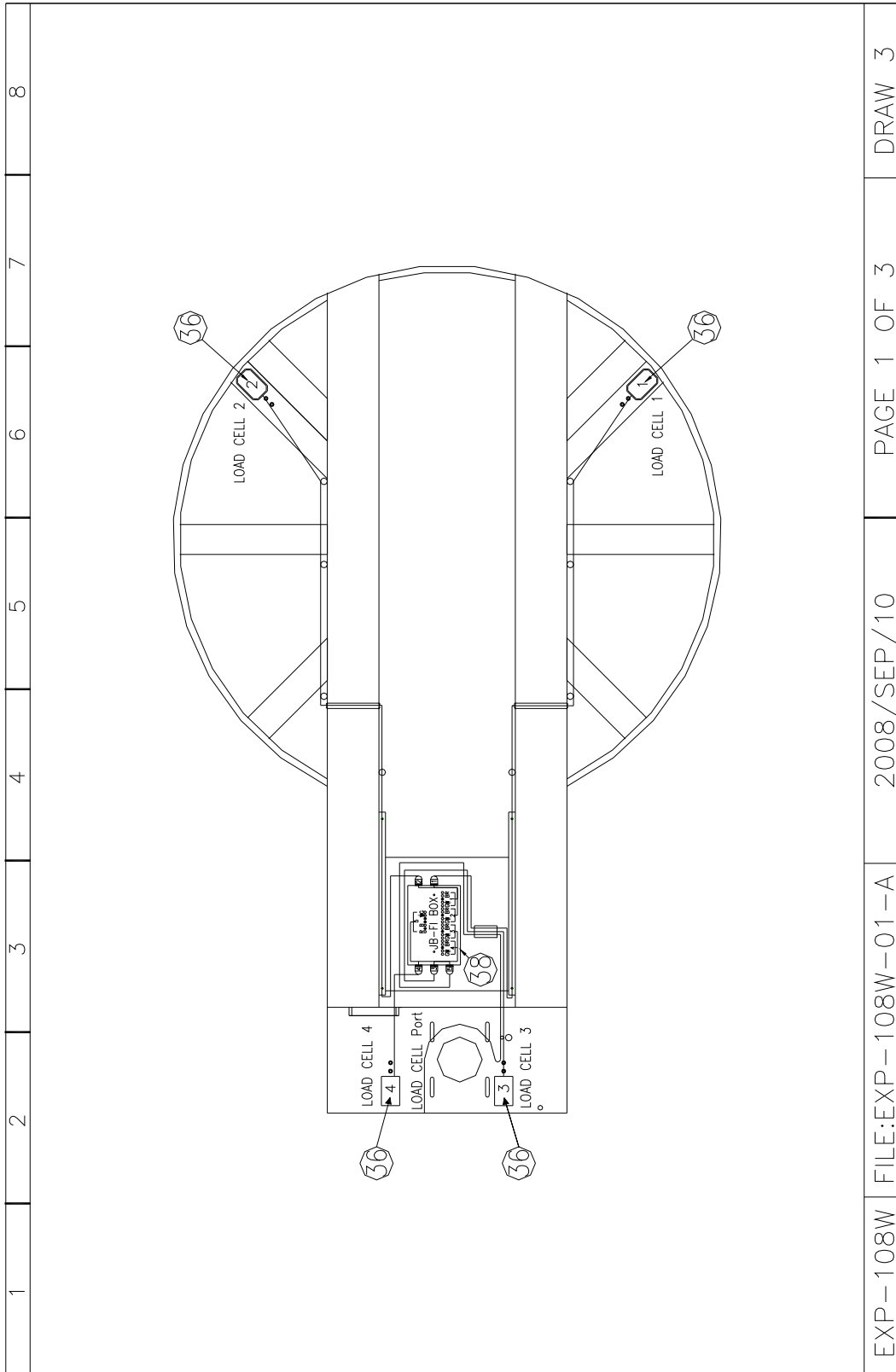
4.2 ELECTRICAL DIAGRAM

Sensor / limit switch location





Electrical Diagram

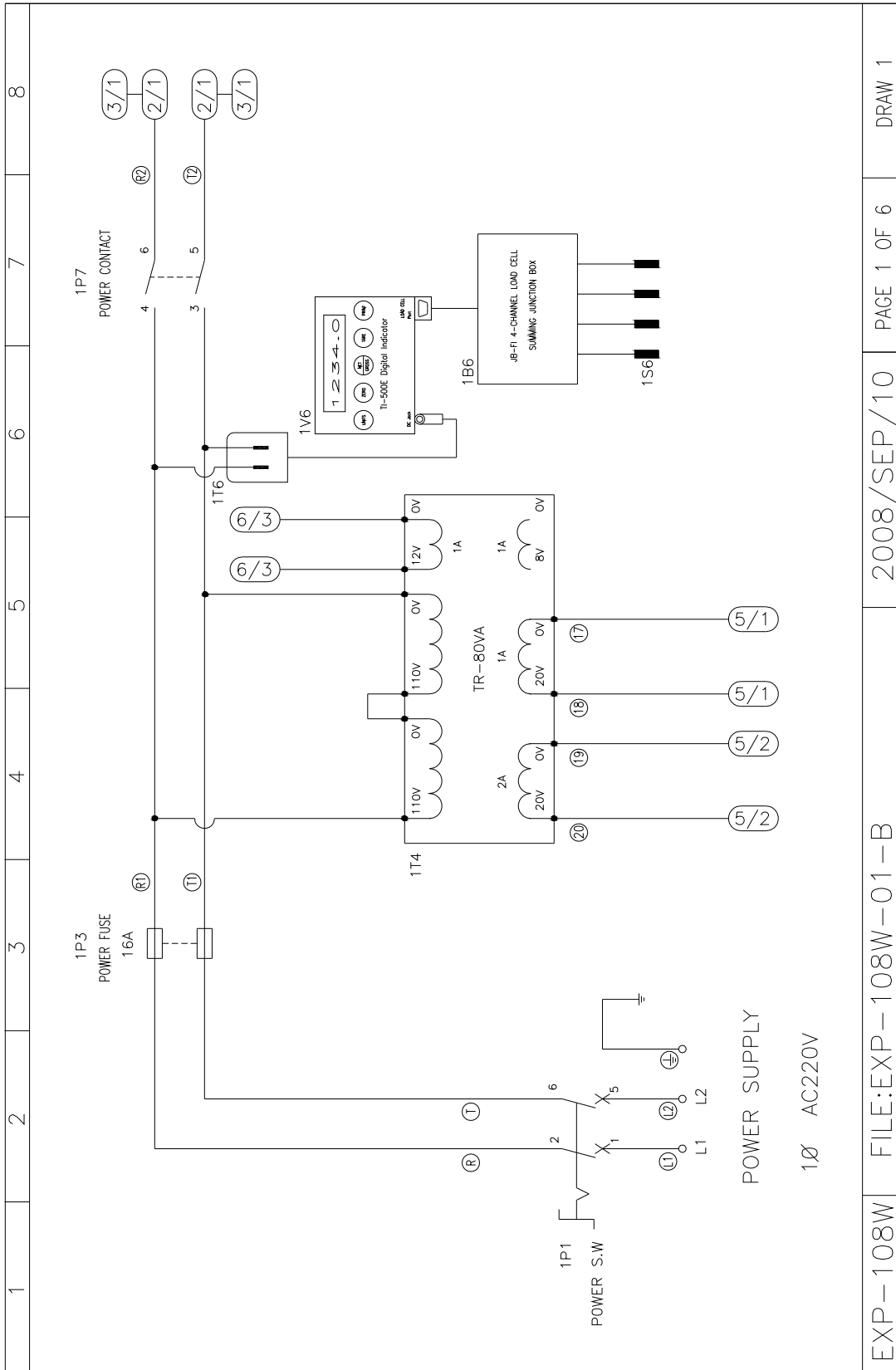


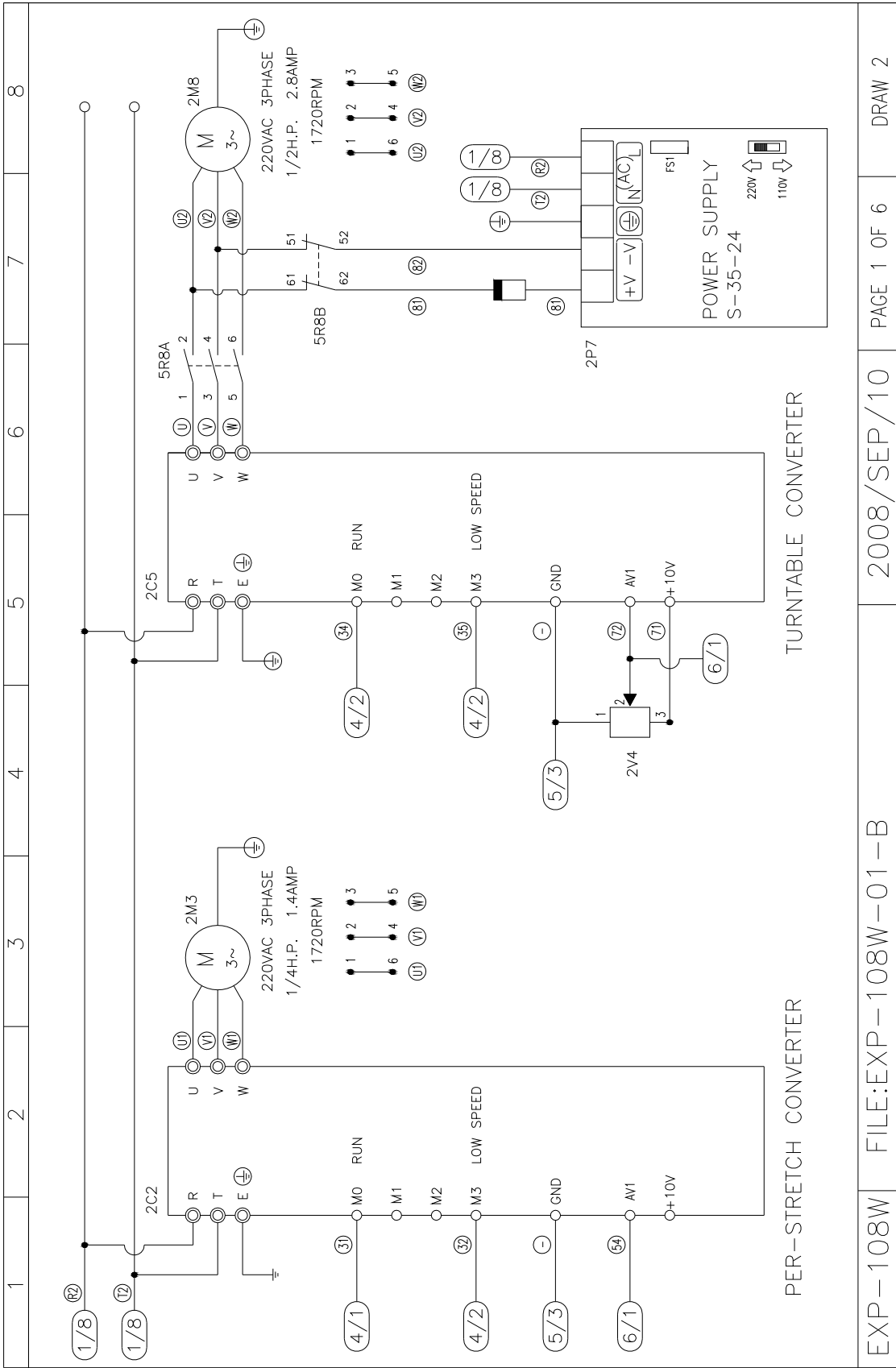
ELECTRIC PARTS LIST FOR EXP-108W

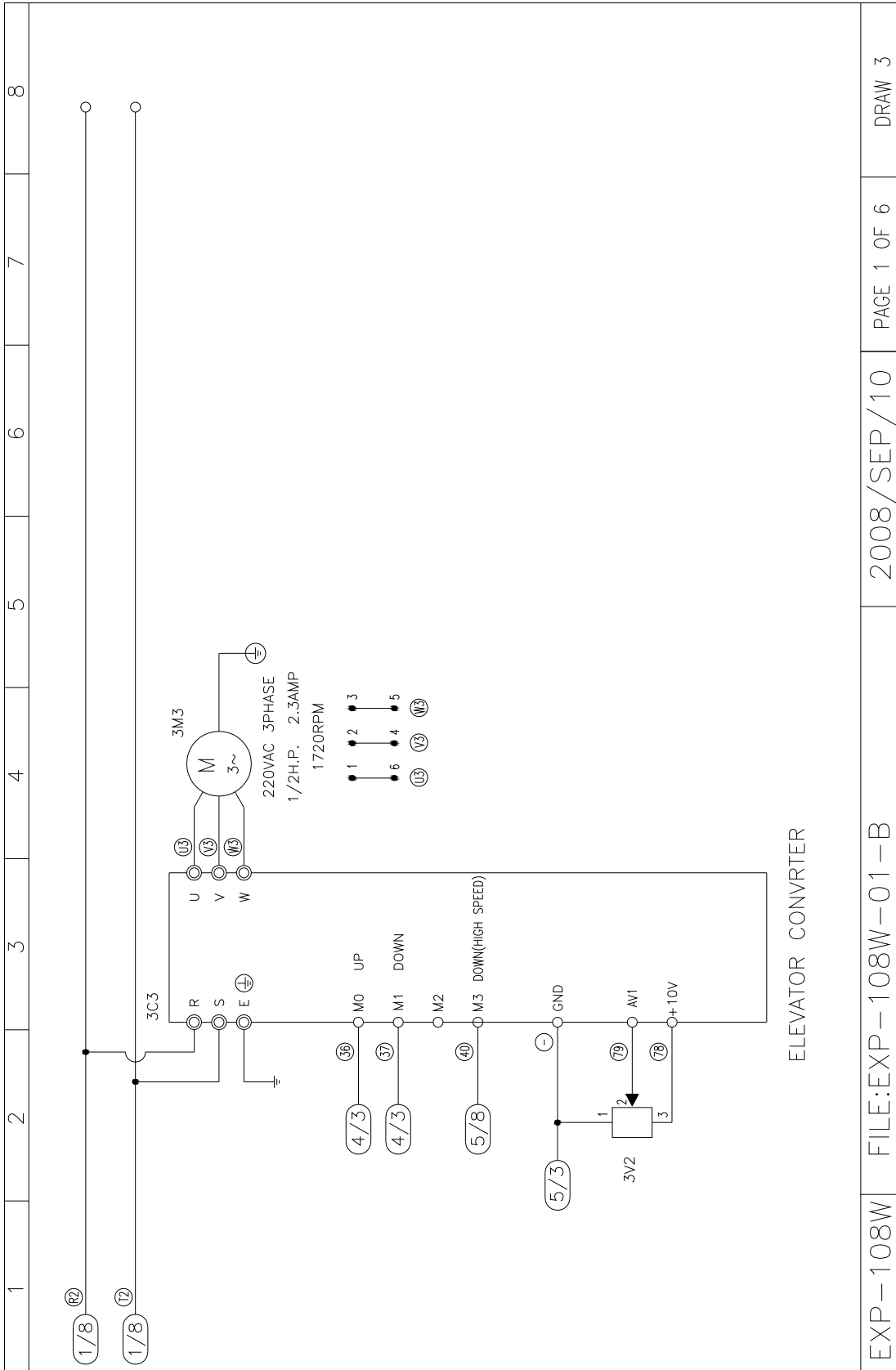
KEY NO	PART NO	DESCRIPTION	Q'TY
1	75811801	MICROPROCESSOR CARD	1
2	7150BW33	AUTO RUN GREEN LAMP - COVER	1
3	7150BW61	AUTO RUN GREEN LAMP - SET	1
4	7150CE24	AUTO RUN LAMP - LAMP	1
5	7158BZ11	KNOB CONTACTOR	2
6	7155BA70	BUTTON - WHITE	1
7	7155BA80	BUTTON - RED	1
8	71610002	KNOB RN-99F	3
9	75510002	VARIOUS RESISTOR 5K	3
10	7155BC20	EMG. SWITCH	1
11	7158BZ12	KNOB CONACTOR	1
12	7170CA01	MAIN POWER SWITCH	1
13	73050204	INVERTOR 110V	3
13	73050206	INVERTOR 220V	3
14	72801003	TRANSFORMER TR-80VA	1
15	72600006	CONTACTOR	2
16	72571601	SWITCH C60A2PC16A	1
17	7580IC01	FILM FEED CONTROLLER	1
18	72560201	FUSE 2A/250V	2
19	75841801	EPROM	1
20	75820000	MAIN CONTROL BOARD	1

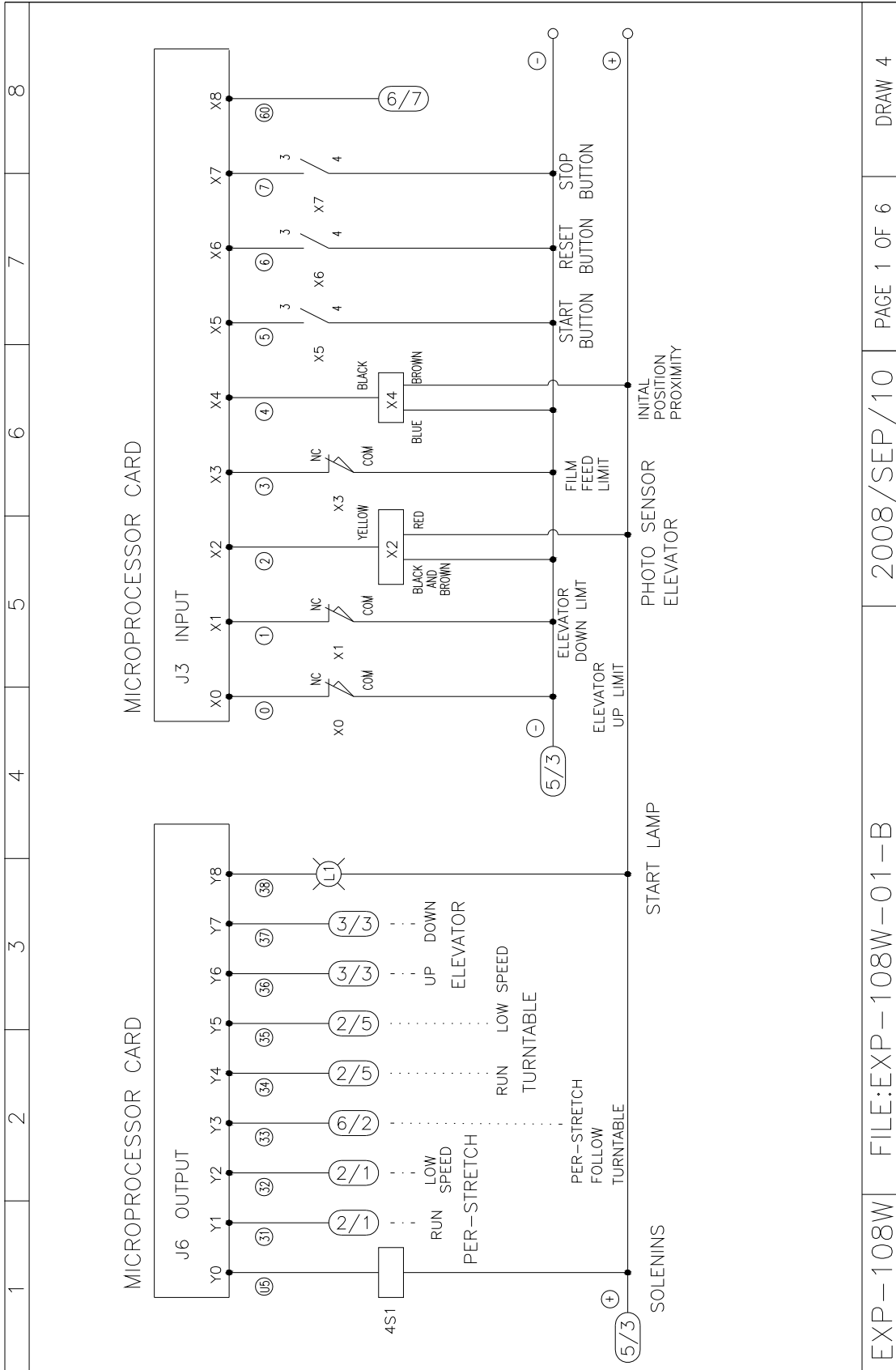
ELECTRIC PARTS LIST FOR EXP-108W

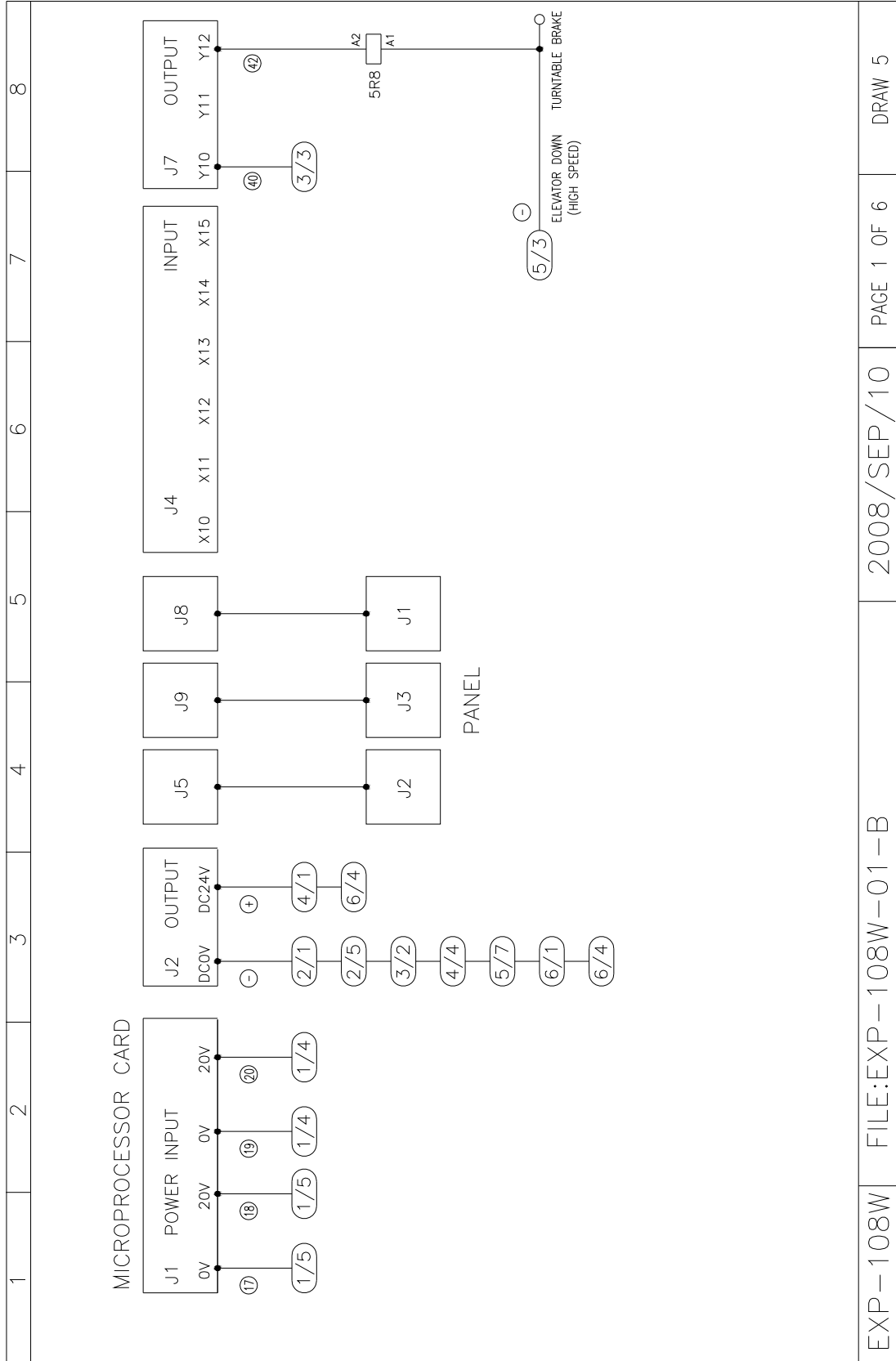
KEY NO	PART NO	DESCRIPTION	Q'TY
21	7055TC05	TERMINAL POST	1
22	72810002	POWER SUPPLY S-35-24	1
23	7159NC02	CONTACTOR	1
24			
25			
26	70560601	TERMINAL BLOCKS TB6P	1
27	7149506A	DIODE 50V,6A	1
29	71500002-01	GREE LAMP 916L,DC24V	2
29	71500002-02	RELAY R23 24V-2P	1
29	7590PC02	STRETCH PERCENTAGE P.C. BOARD	1
30	7365P002	SECURITY SWITCH XCSPA791	1
31	7355N105	PROX SENSOR PM12-04N	1
32	73602M02	PHOTO SENSOR A3R-2MX	1
33	7350TZ04	LIMIT SWITCH TZ-8108	2
34	7350TZ02	LIMIT SWITCH TZ-7110	3
35	PG303700	SOLENOID (TAU-1585 DC24V)	1
36	91000020	LOADCELL SENSOR	4
37	KA0200030	DISPLAY	1
38	KA0200040	WIRING BOX	1
39	70970001	POWER SOCKET	1
40	7350TZ04	LIMIT SWITCH TZ-8108	1

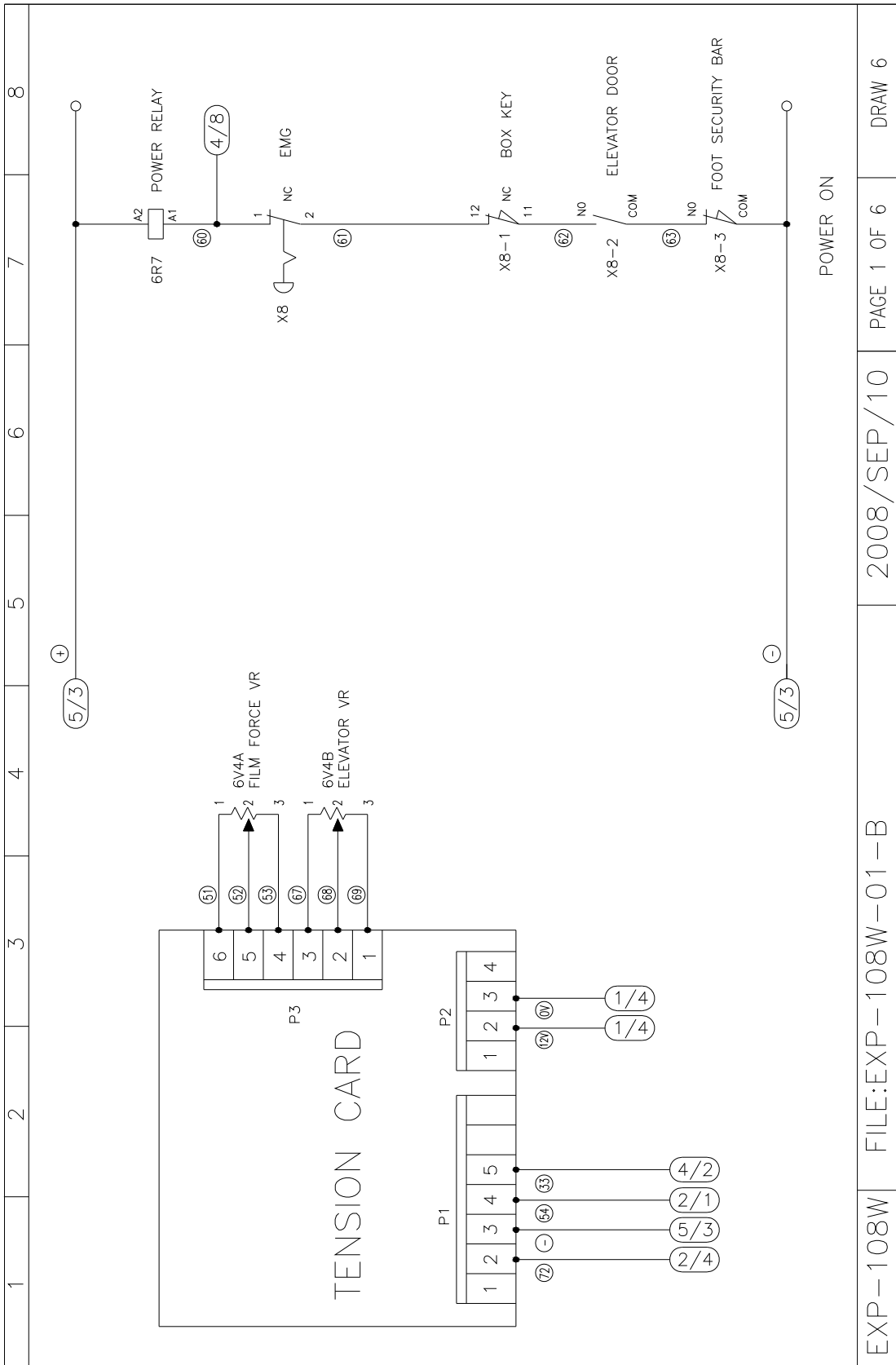












5. TROUBLE SHOOTING

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.

2) Elevator unit driving chain adjust:

Adjust the elevator to proper position and take off the cover tower

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

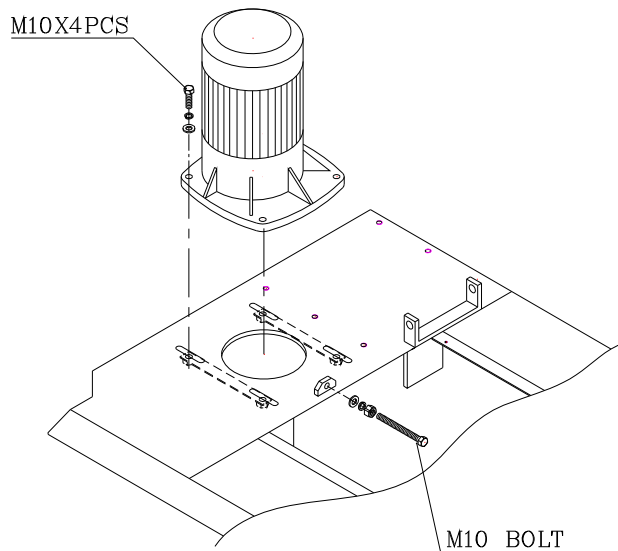


FIG. 5-1

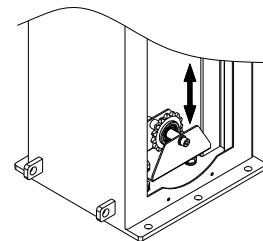


FIG. 5-2

5.2 RUNNING AND SELF TEST

User can check the operation of the machine using the self test by test A. If the self test works properly, the trouble probably lies in the screen. If the self test does not work, contact your dealer or qualified person for assistance.

Running and self test A

1. Turning the knob of turntable and elevator to Max. position.
2. Put a pallet on the turntable for testing. The height of the pallet is about 1M.
3. Turn off the power and switch on the No.6 switch on the microprocessor card.
4. Switch on the power and press START bottom.
5. After the screen shows "EE".The machine will test function, it take about three minutes.
6. Screen will show the alarm cord number.
 - E0: Elevator upper limit switch is breakdown.
 - E1: Elevator lower limit switch is breakdown.
 - E2: Photo sensor is breakdown.
 - E4: Turntable proximity sensor is breakdown.

5.3 SUGGESTION FOR SOLVING “ER0”

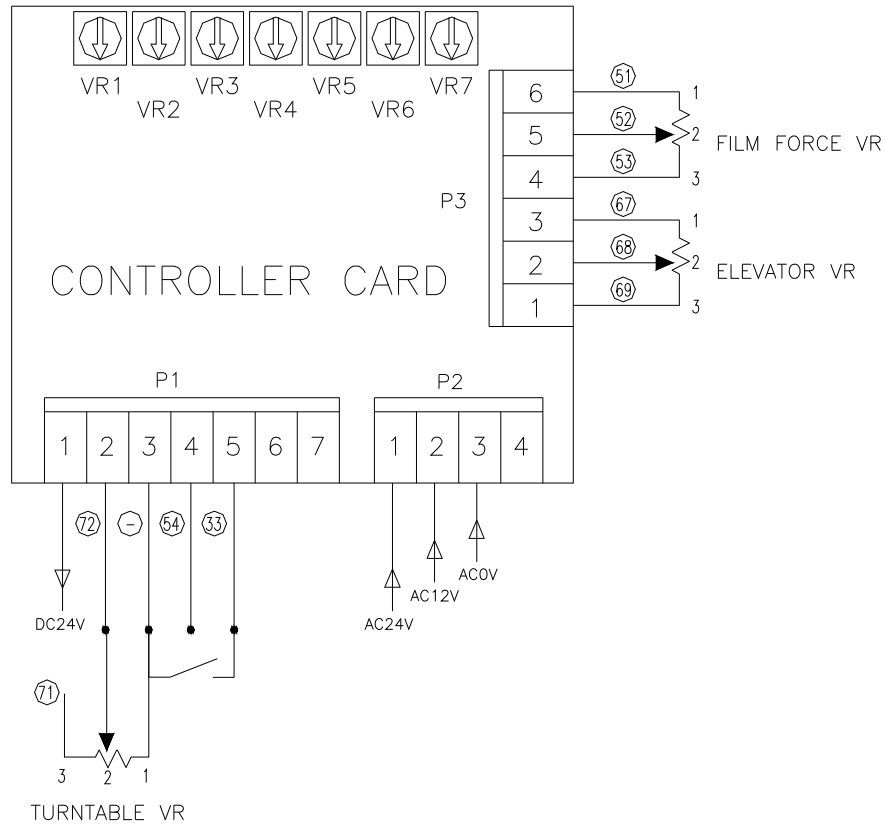
- ♦ Release the emergency stop.
- ♦ Check the power cut switch of control box. If it is activated, please deactivate the switch.
- ♦ Please ensure the safety door of carriage is closed properly.
- ♦ Check the safety switch down the bottom of carriage; deactivate the switch if it is activated.
- ♦ The safety photo sensor of carriage may affect by foreign objects or light source. Please remove foreign object.

5.4 TROUBLE SHOOTING WITH EXP-108W MACHINE

Machine trouble	Cause	Solution
Machine can not work	Power supply for motor tripped Screen lamp not ON. Foot security is broken. Motor is overload	Active the power switch Check micro- processor board. Release the security s/w. Check error message from inverter and refer to Inverter manual
Turntable can not turn	Microprocessor board broken Motor stop turning	Change microprocessor board Check error message from inverter and refer to Inverter manual
Turntable turn slowly and speed cannot be adjusted.	Turntable max. speed controller is broken (VR2). Wires are not connected properly	1.Check the controller connection 2.Check wire connections
Turntable can not Stop at home position.	Turntable proximity S/W is not working.	Check the proximity S/W sense. If it is no problem adjust the sensing plate.
Elevator unit cannot move.	Microprocessor board broken Motor stop turning.	Change microprocessor board Check error message from inverter and refer to Inverter manual
As doing AUTO RUN the elevator unit goes up and over the package height	Photo sensor gets sense from another material except package. Photo sensor gets sense from another light source.	Move away other objects Avoid the light source.
As doing AUTO RUN but elevator cannot goes up.	Photo sensor broken Photo sensor cannot sense a black color package.	Change photo sensor. Avoid a black color package or use manual operation.

Machine trouble	Cause	Solution
Pre-stretch motor can not work	Voltage overload, power supply is not stable Transformer card is broken IC card is broken	Switch off the machine for 10 seconds then switch on the machine Check the lamp L4, L5 and L6 of transformer card is on or not. Check the message from Inverter manual
Pre stretch percentage is not enough	Film is too thick	Operators should make decision themselves to change the film or not
Film easy break	Some objective or damage surface on the pre-stretch roller Pre stretch percentage is not proper The quality of film is defective	Rub the rollers gently Adjust the pre stretch ratio Change the film

Controller Card Explanation and Operation



DIAL	Function
VR1, VR2, VR3	N/A
VR4	Pre-stretch motor max speed
VR5	Manual feeding film speed (set speed)
VR6	Film tension tight adjustment (Clock wise)
VR7	Film tension loose adjustment(Clock wise)

LED	Warning sign
L1, L3 (yellow light)	Warning sign for VR6, VR7 Light will be brighter (reference only)
L2	Pre-stretch motor (red light) cycle faster light will be brighter
L4	N/A
L5	(Green light): Input AC 12V
L6	Green light): Input AC 12V

P1

1. Output DC 24V
2. Turntable Speed Testing
3. Output DC 0V
4. Output 0-5V control inverter output (pre-stretch motor)
5. Pre-stretch tension according to T/T speed
6. N/A
7. N/A

P2

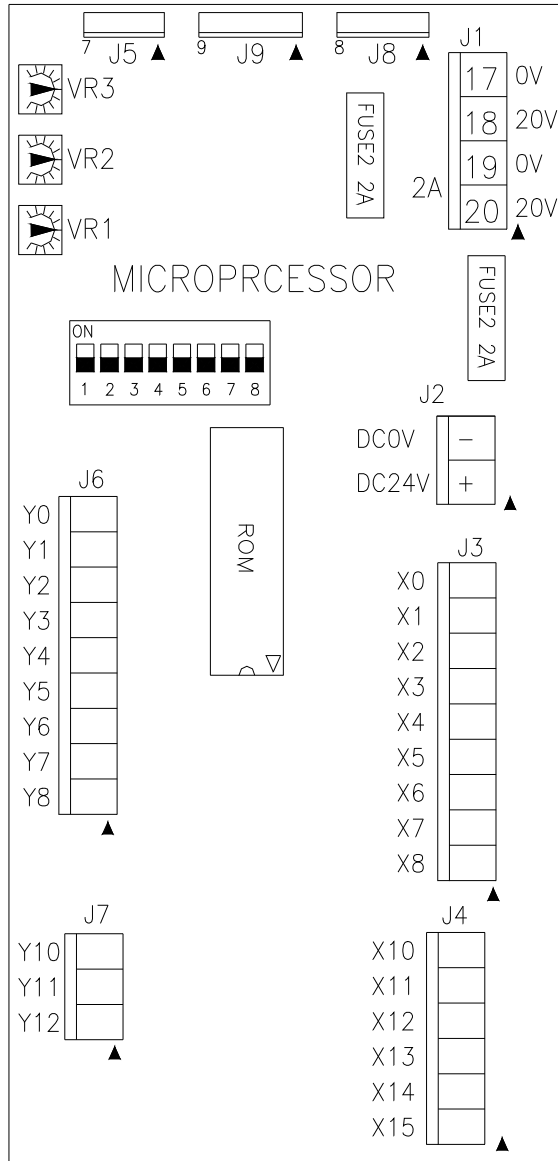
1. Input AC 18V
2. Input AC 12V
3. Input AC 0V
4. Empty

P3

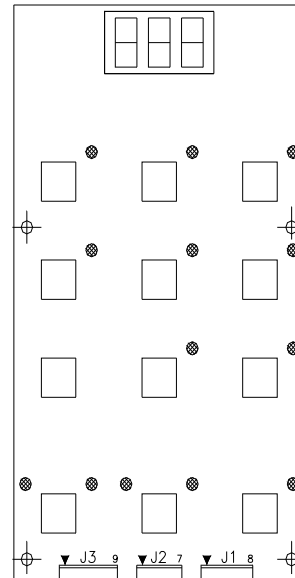
1. Idler bar VR #3
2. Idler bar VR #2
3. Idler bar VR #1
4. Film tension knob # 3
5. Film tension knob #2
6. Film tension knob #1

MICROPROCESSOR CARD AND INSTALLATION

DESCRIPTION



MICROPROCESSOR



Panel

DESCRIPTION OF CONNTECTING POINTS

J1	INPUT POWER
J2	OUTPUT POWER DC 24V
J3.J4	INPUT POINT
J5	CONNECTING J2 (TO CIRCUIT BOARD)
J6.J7	OUTPUT POINT
J8	CONNECTING J1 (TO CIRCUIT BOARD)
J9	CONNECTING J3 (TO CIRCUIT BOARD)

YO	PIN PUNCH
Y1	PRESTRETCH MOTOR START
Y2	PRESTRETCH MOTOR LOW SPEED
Y3	PRESTRETCH MOTOR ACCOMDIATE
Y4	TURNTABLE START
Y5	TURNTABLE LOW SPEED
Y6	CARRIAGE RISING
Y7	CARRIAGE LOWERING
Y8	STARTING LIGHT
Y10	CARRIAGE LOWERING SPEED (Program C)
Y12	TURNTABLE BREAK

X0	CARRIAGE UP LIMIT 0
X1	CARRIAGE DOWN LIMIT 1
X2	CARRIAGE HEIGHT PHOTO SENSOR 2
X3	PRE-STRETCH LIMIT 3
X4	TURNTABLE ALIGNMENT PROXIMITY 4
X5	START BUTTON 5
X6	RESET BUTTON
X7	PAUSE BUTTON
X8	POWER CUT CIRCUIT
VR3	PHOTO EYE SENSOR DELAY TIMER 1. INCREASE OVER WRAP HEIGHT 2. PHOTO SENSOR DELAY WHEN THE SPACE BETWEEN THE PACKING OBJECT IS LARGER

Replace Of Master Card and Adjustment

***Replacing a new Master Card**

1. Switch "Off" main power
2. Replace the New Master Card with the Old Master Card
3. Adjust the New master Card, with the same setting as the Old Master Card.

Note: If the technician cannot notice the setting, adjust the all switches to "6 o'clock position"

Master Card Adjustment

1. Turn on the main power
2. Master Card power lamp L4, L5, L6 3 lamps must be all green
3. Manual film feed speed adjustment:

Turntable stopped, adjust VR5 to 20HZ-30HZ, when adjusting for manual film feed.

4. Pre-Stretch Motor Max speed adjustment:

Turntable starts, on the control panel, switch the Turntable Speed Knob to Max (12RPM).

Pull the first dancing bar; adjust VR4, output frequency of inverter would be 70HZ

Master Card Testing Procedure with Toggle Switch On/Off for EXP-108



Toggle Switch:

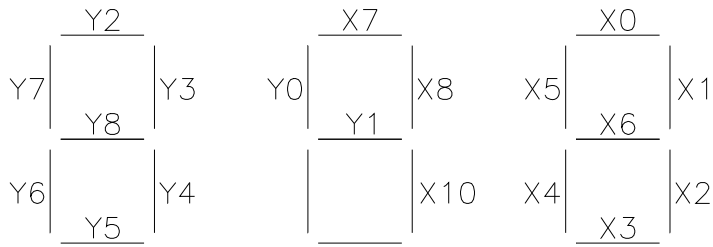
- #1 Continue running (factory testing use)
- #2 N/A
- #3 N/A
- #4 N/a
- #5 I/O display
- #6 Self diagnose
- #7 "Cod" cod 123 (EXP-108)
- #8 Reset

Toggle Switch 6 Operation Explanation

1. Turn the Toggle switch to **On** position
2. Turned **On** the power
3. Press **Start**, the machine will start to run and the display will show EEE. 3 minutes later the machine will stop and the display will display error code.

E0 Carriage up limit	X0
E1 Carriage down limit	X1
E2 Carriage Height photo sensor	X2
E3 Pre-stretch film feeding limit	X3
E4 Turntable alignment proximity switch	X4

Toggle Switch 5 display code explanation

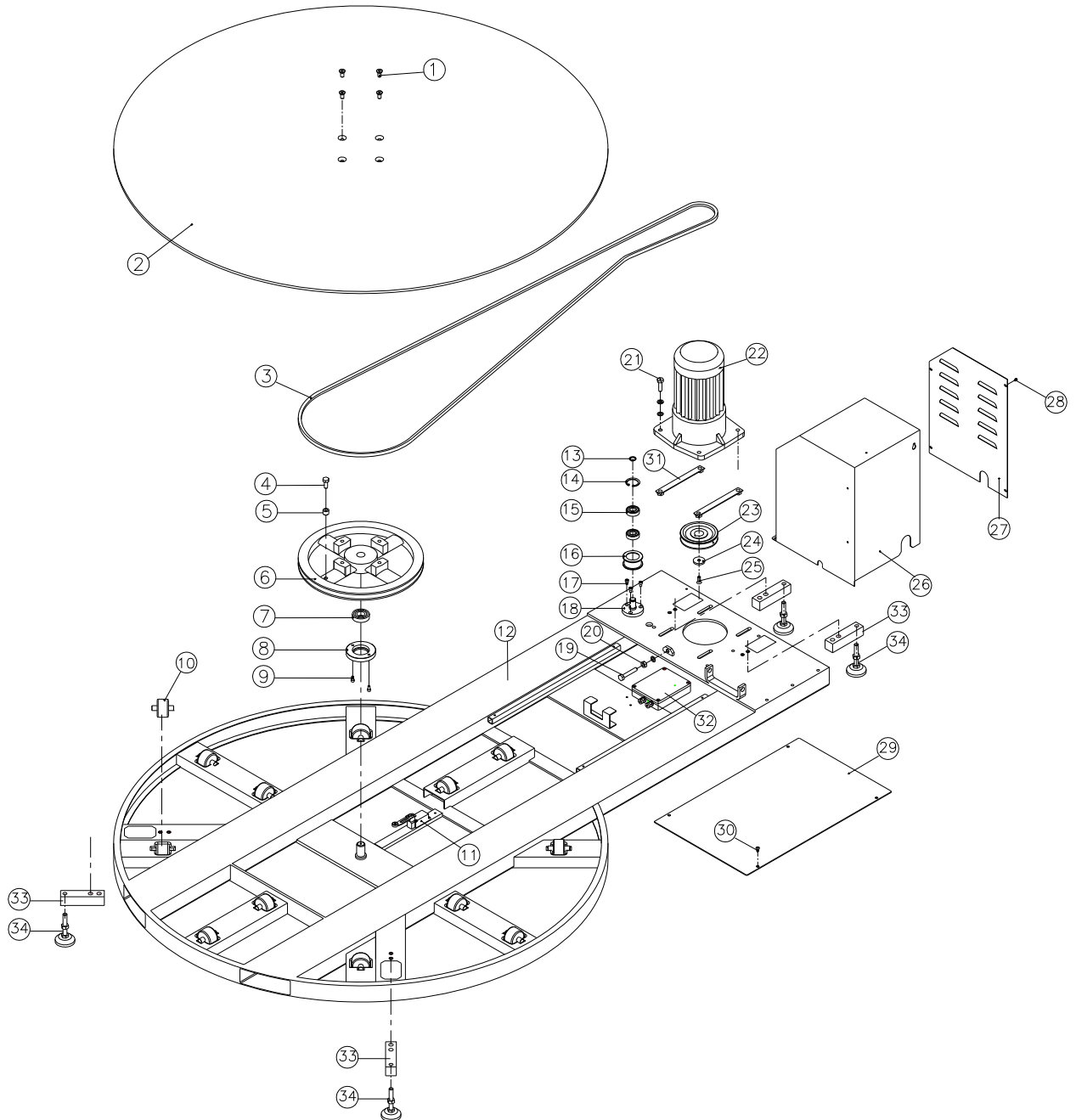


X 0	Carriage Up limit
X 1	Carriage Down limit
X 2	Carriage Height photo sensor
X 3	Pre-Stretch Limit
X 4	Turntable Alignment
X 5	Start button 5
X 6	Reset button 6
X 7	Stop button
X 8	Power cut circuit 60

Y 0	Pin punch
Y 1	Pre-Stretch Motor Start
Y 2	Pre-Stretch Low Motor Speed
Y 3	Pre-Stretch accommodate
Y 4	Turntable Start
Y 5	Turntable Low Speed
Y 6	Carriage Up
Y 7	Carriage Down
Y 8	Start Lamp

6. PART LIST

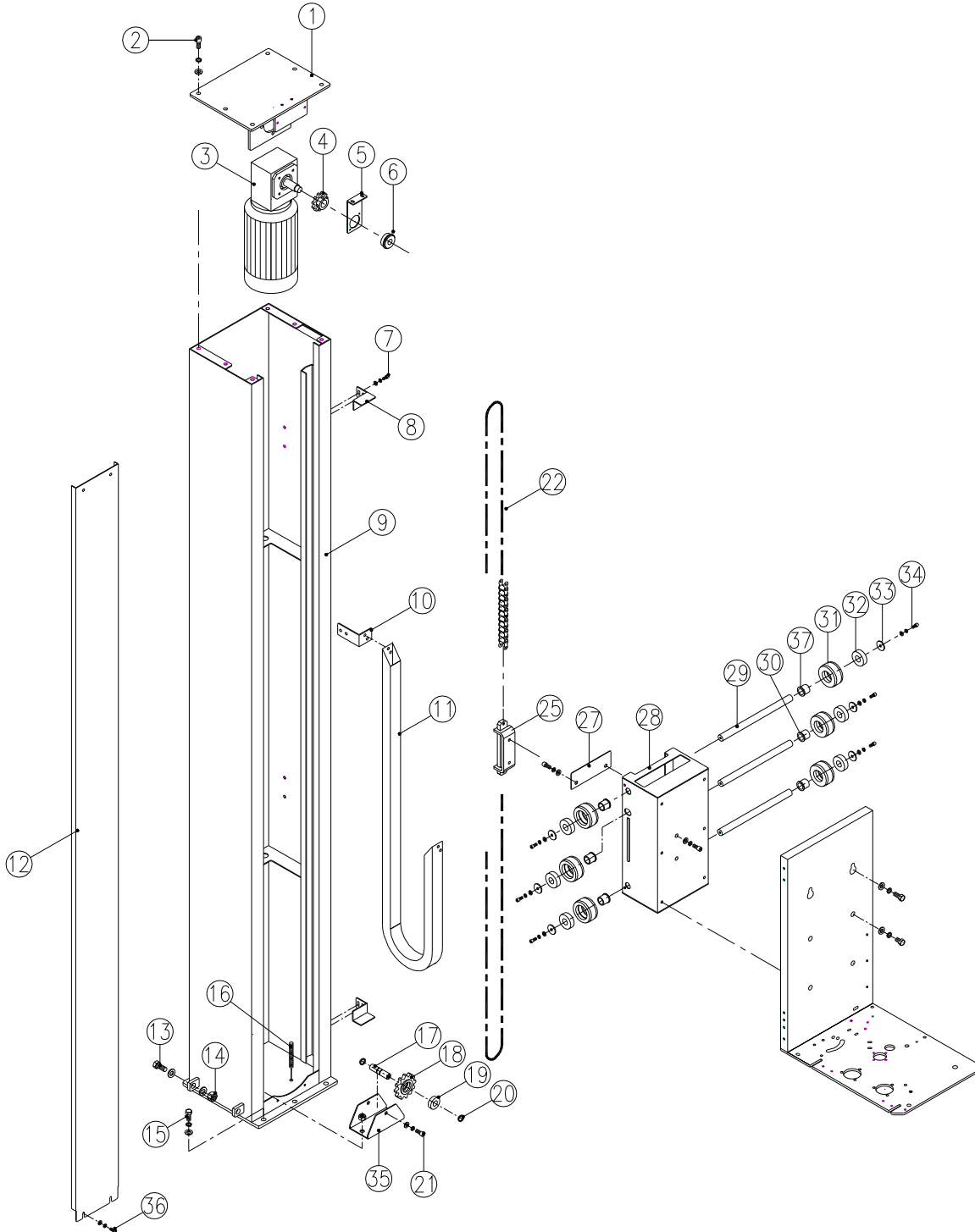
6.1 SEAT



PART LIST FOR EXP-108W

KEY NO	PART NO	DESCRIPTION	Q'TY
1	10141020	SCREW M10x20L	4
2	PJ101200	1.65 M TURNTABLE	1
3	201BX151	BELT→1.65M	1
4	10111020	SCREW M10x20	1
5	KA0301620	BUFFER RING	1
6	KA0301910	PULLY	1
7	30302050	BEARING 6205ZZ(CWB)	1
8	KA0301610	BEARING SEAT	1
9	10100616	SCREW M6x16	2
10	KA3000130	SUPPORTING PLASTIC WHEEL ASSY→1.65M	16
11	7350TZ04	LIMIED SWITCH VL-8108	1
12	KA1103860	TURNTABLE BASE 1.65M	1
13	11301700	RING STW-17	1
14	11314000	RING R-40	1
15	30302030	BEARING 6203ZZ(CWB)	2
16	PJ101000	BELT PULLY BEARING SEAT	1
17	10100612	SCREW M6x12	3
18	KA0301940	BELT PULLY BEARING SHAFT	1
19	10111060	SCREW M10x60L	1
20	10301000	NUT M10	1
21	10111035	SCREW M10x35L	4
22	32903006	GEAR REDUCER MOTOR	1
23	KA0301930	MOTOR BELT PULLY	1
24	KA1102310	WASHER	1
25	10140816	SCREW M8x16L	1
26	PJ100800	MOTOR BOX	1
27	PJ100900	MOTOR BOX COVER	1
28	10190406	SCREW M4x6L	4
29	KA110254A	COVERING PLATE	1
30	10170610	SCREW M6x10	4
31	PJ100500	FIXED PLATE	2
32	KA0200040	WIRING BOX	1
33	91000020	LOADCELL SENSOR	4

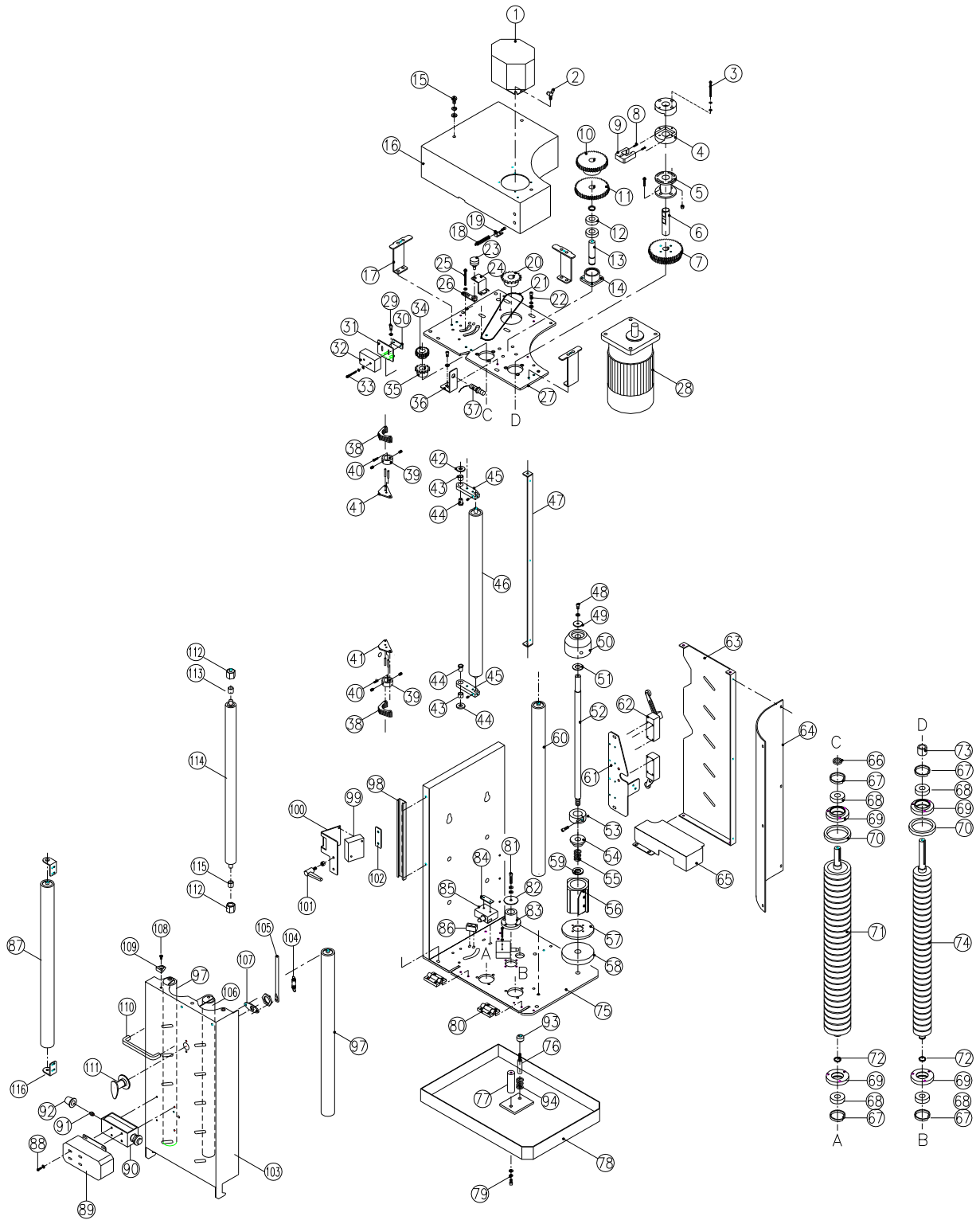
6.2 TOWER



PART LIST FOR EXP-108W

KEY NO	PART NO	DESCRIPTION	Q'TY
1	PJ200300	TOWER COVER (TOP)	1
2	10251025	SCREW M10*25L	4
3	74602002	ELEVATOR UNIT SPEED REDUCER	1
4	PJ201200	GEAR	1
5	PJ201400	SPEED REDUCER BEARING SEAT	1
6	3030202N	BEARING 6202-2NR	1
7	10170508	SCREW M5x8L	4
8	PJ200500	SENSING PLATE	2
9	PJ20010A	TOWER→ 2 M	1
	PJ20011A	TOWER→ 2.5 M	1
	PJ20012A	TOWER →3 M	1
10	PJ309900	SNAKE WIRING COVER SEAT	1
11	7067C063	SNAKE WIRING COVER	1
12	PJ200200	COVER PLATE→ 2 M	1
	PJ200210	COVER PLATE→ 2.5 M	1
	PJ200220	COVER PLATE→ 3 M	1
13	10111235	SCREW M12x35L	2
14	10331200	NUT M12	2
15	10251025	SCREW M10x25L	6
16	10181080	SCREW M10x80L	2
17	PJ201500	GEAR SHAFT	1
18	PJ201300	GEAR	1
19	30300020	BEARING 6002ZZ (CWB)	1
20	11301500	RING STW-15	2
21	10250820	SCREW M8x20L	1
22	3240S401	CHAIN→ 2 M	1
	3240S402	CHAIN→ 2.5 M	1
	3240S407	CHAIN→ 3M	1
23			
24			
25	PJ201700	CHAIN ADJUST SEAT	1

6.3 ELEVATOR



PART LIST FOR EXP-108W

KEY NO	PART NO	DESCRIPTION	Q'TY
1	PJ306200	SUPPORTING COVER	1
2	10210512	WING NUTS M5x12L	2
3	10130450	SCREW	4
4	PG303200	HANDLE	2
5	PG302900	GEAR PULL WHEEL	1
6	PG303100	POSITION SHAFT	1
7	PJ310400	SLIP GEAR 200% & 250%	1
	PJ309800	SLIP GEAR 230% & 300%	1
	PJ310410	SLIP GEAR 150% & 250%	1
8	PG304200	SPRING	2
9	PG303000	SAFETY BUTTON	1
10	PJ310300	FIXED GEAR 41T→250%	1
	PJ309700	FIXED GEAR 42T→300%	1
	PJ310310	FIXED GEAR 36T→250%	1
11	PJ310200	FIXED GEAR 44T→200%	1
	PJ309400	FIXED GEAR 46T→230%	1
	PJ310210	FIXED GEAR 42T→150%	1
12	30300030	BEARING 6003ZZ (CWB)	2
13	PJ309600	FIXED GEAR SHAFT	1
14	PJ309500	BEARING SEAT	1
15	10240610	SCREW M6*10L	3
16	PJ300310	TOP COVER	1
17	PJ305900	TOP COVER SHAFT	3
18	PB202800-01	SPRING	2
19	PJ308500	SPRING SEAT	2
20	PA311100	CHAIN GEAR 17T	1
21	3240S357	CHAIN	1
22	10110830	SCREW M8X30L	4
23	75510002	VARIOUS RESISTOR 5K	1
24	PJ302800	RESISTANCE FIXED SEAT	1
25	10130545	SCREW M5x45L	1
26	PJ301600	MOVING SHAFT SEAT	1

PART LIST FOR EXP-108W

KEY NO	PART NO	DESCRIPTION	Q'TY
27	PJ300200	CARRIAGE UNIT UPPER SEAT	1
28	32903004	MOTOR SV-A10	1
29	10250616	SCREW M6x16L	2
30	PJ308600	FIX PIECE	1
31	PJ301500	LIMIT FIXED SEAT	1
32	7350TZ02	LIMIT SWITCH TZ-7110	1
33	10130435	SCREW	2
34	PJ310100	GEAR →200% &250%	1
	PJ309200	GEAR →230% &300%	1
	PJ310110	GEAR →150% &250%	1
35	PJ303100	12 T CHAIN WHEEL	1
36	PG304000	PROXIMITY SWITCH SEAT	1
37	7355N105	PROXIMITY SENSOR PM12-04N	1
38	PB206100	BLOCK	10
39	PB206300	RING	2
40	PB206400	SPRING	2
41	PB206200	PLATE	2
42	PB202500	RING	2
43	3034HK02	BEARING HK 1010	2
44	PB202700	SWINGING BAR SHAFT	2
45	PJ309100	MOVING SHAFT SEAT	2
46	PJ302100	ROLLER SET	1
47	PJ308400	SUPPORTING SHAFT	1
48	10250616	SCREW M6*16L	1
49	PJ201000	RING	1
50	PJ303900	RING (UPPER)	1
51	PJ305100	RING	1
52	PJ303700	FILM SEAT SHAFT	1
53	PM302900	ADJUSTING RING	1
54	PM300600	RING (LOWER)	1
55	PM302400	SPRING	1
56	PM30050A-01	FILM FIX SEAT	1

PART LIST FOR EXP-108W

KEY NO	PART NO	DESCRIPTION	Q'TY
57	PM30050A-03	BRAKE DISC	1
58	PJ304100	FRICITION SEAT	1
59	30361730-01	BEARING NTB1730	1
60	PJ351500	ROLLER SET	1
61	PJ300500	LIMIT SEAT	1
62	7350TZ04	LIMIT SWITCH TZ-8108	2
63	PJ300800	SIDE PLATE	1
64	PJ309300	ACRYLIC DOOR	1
65	PJ306400	TERMINAL COVER	1
66	PJ301200	ISOLATED RING	2
67	11314200	C-RING R-42	4
68	30302030	BEARING	4
69	PJ300700	BEARING SEAT	4
70	PJ308000	PROTECTION RING	2
71	PJ301310	PRE STRETCH SHAFT	1
72	11301700	C-RING S-17	2
73	PJ309000	ISOLATED RING	1
74	PJ301410	PRE STRETCH ROLLER	1
75	PJ30010A	ELEVATOR UNIT SEAT	1
76	PJ307800	SENSOR IDLE	1
77	PJ30270A	PEDAL SHAFT	1
78	PJ30040A	PEDAL	1
79	10140820	SCREW M8x20L	1
80	PJ304900	HING	2
81	10250616	SCREW M6x16L	1
82	PJ306500	SAFE PLATE	1
83	30392020	LINEAR BUSHING	1
84	PJ308600	FIX PIECE	2
85	7350TZ02	LIMIT SWITCH	2
86	PB202900	BLOCK	2
87	PJ302000	ROLLER SET	1
88	10190410	SCREW M4x10L	4
89	PJ310600	COVER	1
90	PG303700	SOLENOID 24 VDC TAU-1585	1

PART LIST FOR EXP-108W

KEY NO	PART NO	DESCRIPTION	Q'TY
91	PB207200	PIN PUNCH	1
92	PJ310500	PLUG	1
93	PJ307900	RING	1
94	PM302400	SPRING	1
95			
96			
97	PJ302000	ROLLER ASSEMBLY	2
98	PJ350800	TRACK PLATE TBC-N	1
99	73602M02	PHOTO SENSOR A3R-2MX	1
100	PJ303210	PHOTO SENSOR SEAT	1
101	91280002	HANDLE BAR 6x13	1
102	PJ350700	FIXED PIECE	1
103	PJ300910A	SAFETY DOOR	1
104	PJ352700	SPRING	1
105	PJ308800	DOOR BOLT	1
106	PJ302300	ROLLER ASSEMBLY	1
107	PJ308700	PLATE	1
108	10140610	SCREW	1
109	PB204300	SECURITY KEY	1
110	CE400700	DOOR KNOB	1
111	91280003	HANDLE BAR	1
112	PJ310800	ONE WAY ROLLER SEAT	2
113	3034HK02	BEARING HK1010	1
114	PJ30450A	ONE WAY ROLLER ASSEMBLY	1
115	3034HF10	BEARING HK 1012	1
116	PJ310700	ROLLER SEAT	2

6.4 CONTROL BOX

