PALLET   STRETCH   WRAPPING   MACHINE

MODEL: <u>EXP-308</u>

<u>OPERATION   MANUAL</u>

100.08.05

TABLE OF CONTENT

1. GENERAL

1.1 NOTICE OF INSTALLMENT

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 O   - 45

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 to 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 the problem occurs, please check the section of 5 Trouble shooting

2. SPECIFICATION

2.1 SPECIFICATION TABLE

Model	EXP-308
Turntable Speed	0-12 RPM
Turntable dia.	1500mm
Max. Wrapping height	2000mm
Max. Wrapping size	1050x1050mm
Max. Loading weight	1650Kgs
Film stretch (%)	Infinite/manual adjust
Film tension	Adjustable
Elevator unit speed	Adjustable
Max. film spec.	⌀250x500mm
Turntable height	82mm
Ramp (slope) spec.	1165x1000mm
Machine size	2400x1500x2345mm
Machine net weight	400Kgs

Standard option:

- 1.65 & 1.8 meters dia. turntable.

- 2.5 & 3.0 meters wrapping height

- Ramp

2.2 MACHINE DIMENSION

300

195

318

Ø250

2400 (MACHIN LENGHT)

900

(PALLET SIZE) □1050

Ø1500
(TURNTABLE SIZE)

2345 (MACHINE HEIGHT)

2000 (WRAPPING HEIGHT)

750

1045

710

82

2.3   Machine Description

CONTROL BOX

TOWER

STRETCH HANDLE

MOTOR BOX

TENSION ADJ.KNOB

ELEVATOR

STRETCH ROLLER

TURNTABLE

FOOT SECURITY

SEAT
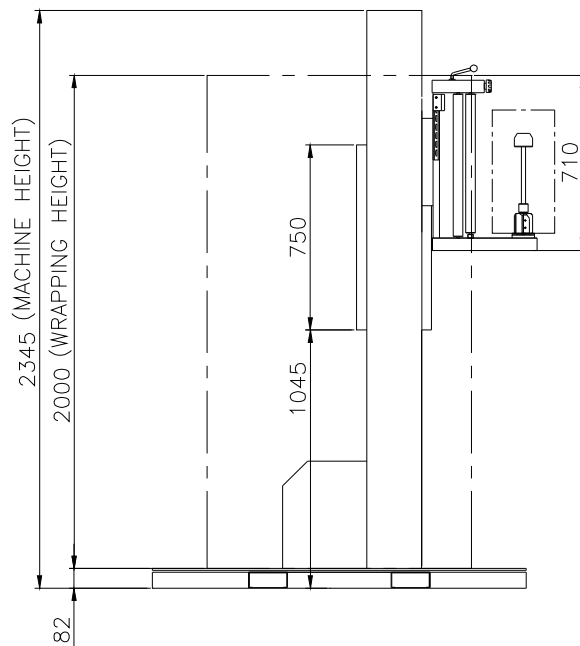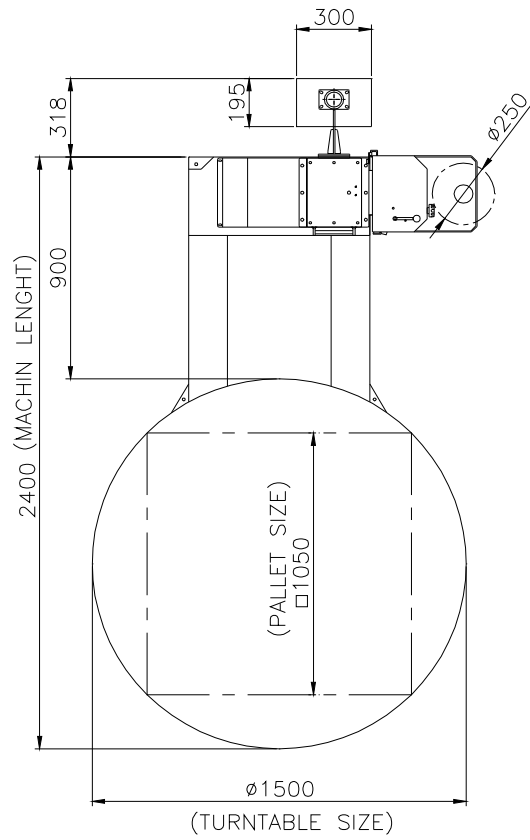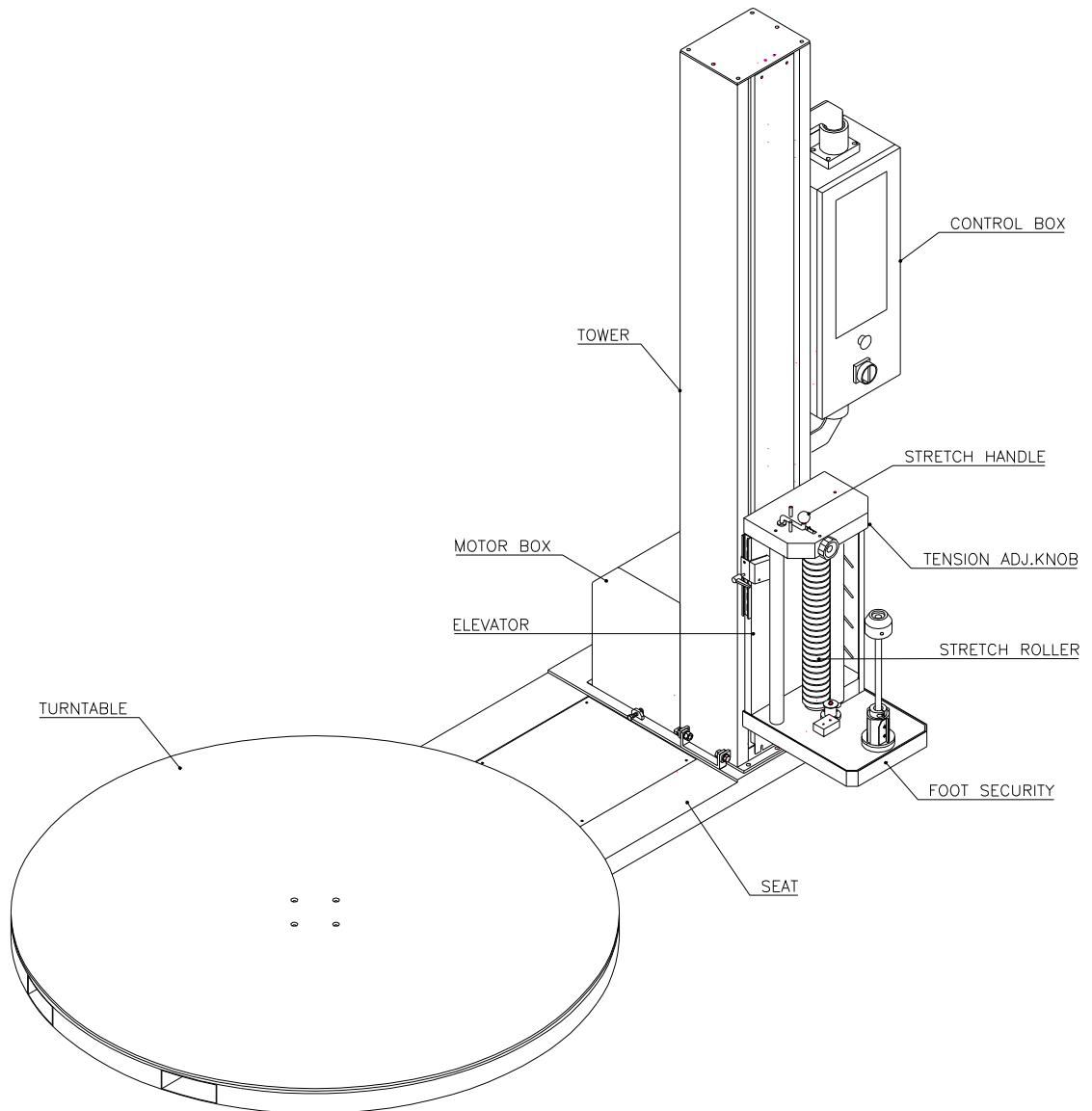
3. OPERATION DESCRIPTION

3.1 INSTALLMENT

1) Apart the wooden package. Avoid damaging the machine.

2) Install the control box.

    a. Fix the lower part of supporting tubes.

    b. Install the control box.

    c. Fix the upper part of supporting tubes.

3) Lift up the tower. Fix and tighten the left bottom side of the tower by three M10 screws.

4) Connect the connecter wires and install the motor cover.

    a. Turntable sensor connecter: +,-,4.

    b. Elevator connecter: U3,V3,W3.

5) Loosen three M13 screws between the base plate of the machine and the pallet. Move the machine to an installment position.

6) Connect the power cable with the socket by a 110V/220V Power.   After electrify the machine, lift up the elevator, then fix and tighten the right bottom side of the tower by three M10 screws.

3.2   REMINDER OF INSTALLATION

There are some of issues need to pay attention on:

Tower Installation

When installing the tower, the engineers must make sure all six screws is properly installed underneath the tower, evenly lay out.

Control Panel Installation

When installing the Control Panel, the engineers, must make sure the bottom-supporting arm is installed properly to the tower with 4 screws and carefully fitted the tower on to the bottom-supporting arm and installed the top-supporting arm, on top of the Control Panel.   After the installation is done, make sure, the Control Panel is tunable 180 degree.

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 the 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
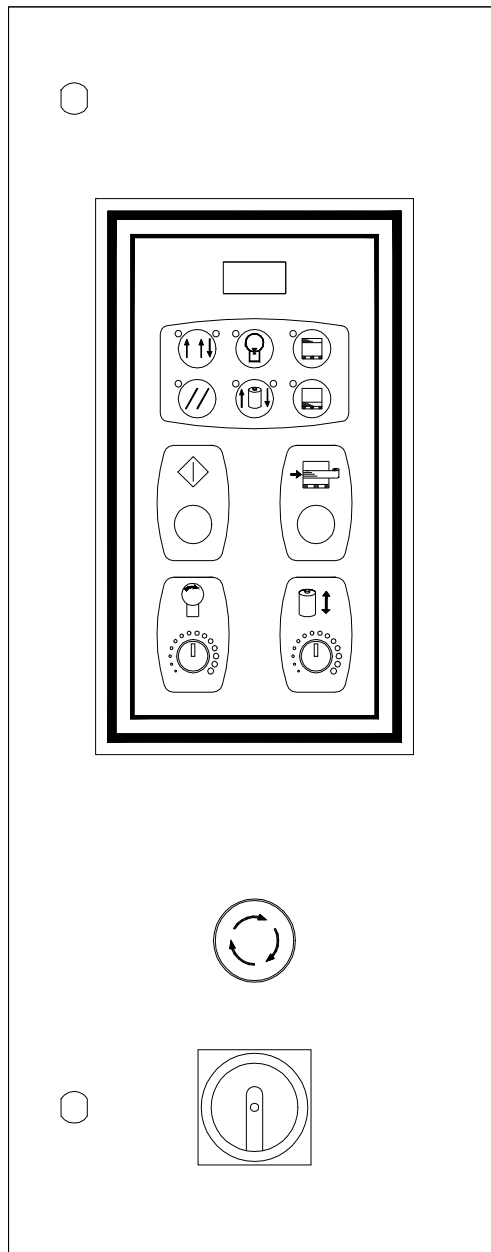
3.4 OPERATION DESCRIPTION
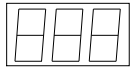
Screen Reader

Screen shows **"S"** : means " Manual   Operation"

Screen shows **" ErO"** means " emerge stop"

Screen shows **"A"** means " program A"

Screen shows **"B"** means " program B"
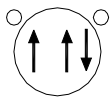
WRAP MODE BUTTON

There are 2 wrapping modes available

A. When choosing a complete wrapping cycle -- mode A. The LED light on WRAP MODE button's upper right is on. The carriage goes from bottom to top and top to bottom on one pallet to complete a wrapping cycle.

B. When choosing a bottom to top one way wrapping type, the left light is on. The carriage goes from bottom to top, then stopped, after operator cut out the film, press the "Start" button, then the carriage will goes down to home position, waiting for next pallet.

TURNTABLE BUTTON

This is a control button for manual operation.

Pressing this button, the light on. Then press

the "START" button to operate the turntable. Pressing this

button again to stop the turntable and the light goes off. During

the process of the carriage going up or down, users can

operate the turntable by pressing this button.
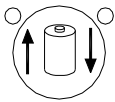
ELEVATOR BUTTON

This is a control button for manual operation.

After this button is pressed, either its left or right lamp is on. If

its upper left lamp is on, the carriage will goes up after START

is pressed.

If the upper right lamp is on, the carriage will comes down as

soon as the "START" button is pressed.

To stop in the middle of any elevation or descent, simply press

this button again. Both lights would go off. During the process

of the turntable spinning, users can operate the carriage by

pressing this button.

RESET BUTTON

Press the button, all operation is released and the machine

returns to neutral status.
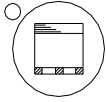
WRAP CNT. (TOP) BUTTON

Press this button to choose the number of top wrapping count from 0 to 9.
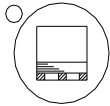
WRAP CNT. (BOTTOM)   BUTTON

Press this button to choose the number of bottom Wrapping count from 0 to 9.
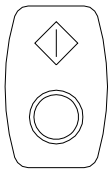
START BUTTON

Press the button to get automatic or manual program running. Except for a special need. Please adjust 2 speed ADJ. knobs for ELEVATOR/TURNTABLE to the following positions:

NOTE: When the machine is operating the automatic or manual wrapping program, the lamp will stay on till the wrapping is finished.
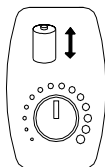
ELEVATOR SPEED ADJ:

Turn the knob clockwise to increase elevator unit goes up and down speed, Turn counterclockwise to decrease the speed. Turning the knob to Min. position can stop the elevator unit from moving. The speed adjust knob is available for both "AUTO" and "MANU" running.

If there is no particular requirement, please set the knob on standard position.
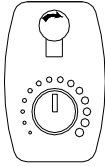
TURNTABLE SPEED ADJ:

Turn the knob clockwise to increase the speed of the turntable. Turn counterclockwise to decrease the speed. As the knob turn to Min. position, the turntable will be stopped from turning. The speed adjust is available for both "AUTO" and "MANU" running. If there is no particular requirement, please set the knob on standard position, the turntable speed is 12 RPM.
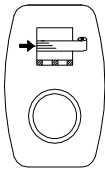
REINFORCE BUTTON

When the package needs to be reinforced it's wrapping partially, whether it's under auto or manual mode, just press the button continued, the carriage would stop elevation and keep wrapping. When the button is released, the carriage would continue its original up or down movement.
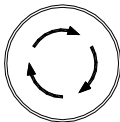
EMG. STOP

Press the button for emergency stop. For security consideration, the turntable will not be stopped instantly as the EMG. STOP switch is pressed. As the turntable power is switched off, the break Will be release too. Turntable will be stopped in 10　~ 70　. It depends on the weight load.
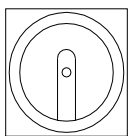
MAIN POWER

To switch ON and OFF the power.

SECURITY BAR

When this security switch is activated, the main power of motor of the machine will be cut off.

But the DC24V control power is still on.   As soon as the factor which activates this security switch is taken off, press START button to continue and complete the rest of wrapping cycle.

ELEVATOR UNIT

1) Illustration for film threading.

2) Stretch tension bar: Pull the bar to " A "side to get stretch tension. Pull the bar to " B "side to release stretch tension.

3) Stretch tension adjust knob: Turn the knob clockwise to increase the tension. Counterclockwise to decrease the tension. Adjust and set the indicate needle on the degree between 2 - 3 can get the stretch tension is 1 meter Film stretched to be 1.65 meters.

A

B

FILM THREADING

Cling Inside

Cling Outside

FILM

FILM

4
3
2
1
0

STRETCH TENSION BAR

STRETCH TENSION ADJUST KNOB
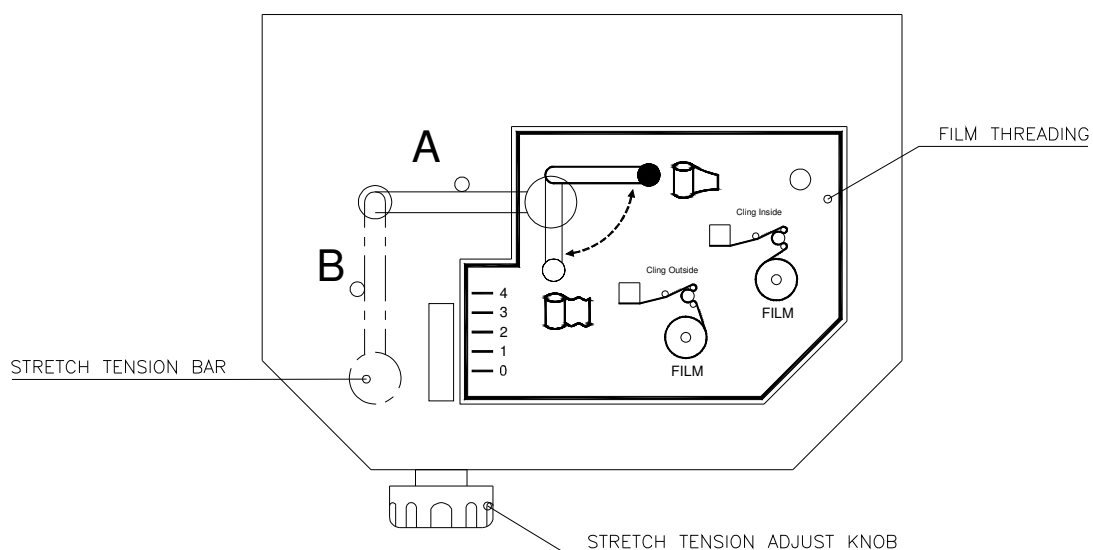
4. ELECTRICAL
4.1 ELECTRICAL CAPACITY

1) Power Consumption

Turntable motor	0.4 KW
Elevator Motor	0.4KW
Control & wiring box	DC 24V 50W
Machine Power Use	0.85 KW
Power Socket need	1 KW

2) Power Cable ---------------------- 1.25 mm^2

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

4.2   ELECTRIC DIAGRAM

TABLE
CONVERTER
⑬

CARRIAGE
CONVERTER
⑬

AV1	AFM	M0	M1	M2	M3	M4	M5	GND
+10V								
71	72	34		35				−

R2 T2 U V W

AV1	AFM	M0	M1	M2	M3	M4	M5	GND
+10V								
78	79	36	37					−

R2 T2 U3 V3 W3

⑯ ⑮ ⑭

12V	1A	1A	0V	*
0V			8V	*
R1 110V		1A	0V	17
0V	TR−80VA		20V	18
110V		2A	0V	19
T1 0V			20V	20

R	T	R1	T1
POWER FUSE 16A		POWER CONTACT	+
R1	T1	R2	T2 60

①

⑫ ③ ④

CARRIAGE PSUSE
X6
| NO |
| 6 |
⑥ + ⑤

START
X5
| − | + |
| 5 | G 38 |
LIGHT
L1

② + ③ + ④

CARRIAGE VR
VR2
5KΩ
⑧ + ⑨ 78 79 −

TABLE VR
VR3
5KΩ
71 72 − ⑧ + ⑨

81
㉗

VR3
J5 J9 J8 J1
17	0V
18	20V
19	0V
2A	20	20V
FUSE2 2A
⑱

| R2 |
| R2 |
| T2 |
| T2 |
| + |
| + |
| + |
| − |
| − |
| − |
| 0 |
| 1 |
| 2 |
| 4 |
| 62 |
| 72 |
| L1 |
| L2 |

㉑

㊱
FUSE1 1A
J2
| DC0V | − |
| DC24V | + |

MICROCONTROLLER

Y0	
Y1	
Y2	
Y3	
Y4	34
Y5	35
Y6	36
Y7	37
Y8	38

J6

J3
X0	0
X1	1
X2	2
X3	3
X4	4
X5	5
X6	6
X7	7
X8	60

⑲

Y10	
Y11	
Y12	42
J7

J4
| X10 |
| X11 |
| X12 |
| X13 |
| X14 |
| X15 |

⑳

| 80 | 82 | T2 | R2 |
| +V | −V | N (AC) | L |
㉒
FS1
POWER SUPPLY
S−35−24
220V
110V

EMG
X8
| 60 |
| NC |
| 61 |
⑩ + ⑪

U2			U
V2	U2 NC 81		V
W2 42	V2 NC 82		+	W
⑮
㉓

⑫
| R | | L1 |
| T | | L2 |
POWER SW.

㊀㊉㊉㊂㊉㊉㊉
㉖

| 61 |
| 62 |
㉚

Electrical Diagram

MODEL: EXP−308	FILE: EXP−308−01−A	DATE: 2/FED/2005	PAGE 1 OF 1

POWER CONTACT

1P6

3/1 2/1 2/1 3/1

R2 T2

TR-80VA

brown 12V 1A red 0V

brown 0V red 8V 1A

yellow 110V orange 0V 1A 17 5/1

blue 0V orange 20V 18 5/1

white 110V green 0V 19 5/2

black 0V green 20V 2A 20 5/2

1T4

1P3
POWER FUSE
16A

R1 T1

POWER SUPPLY

1Ø AC220V

6 X 5 L2 2

2 X 1 L1 1

T

R

1P1
POWER S.W

1 2 3 4 5 6 7 8

17

TURNTABLE CONVERTER

POWER SUPPLY
S-35-24
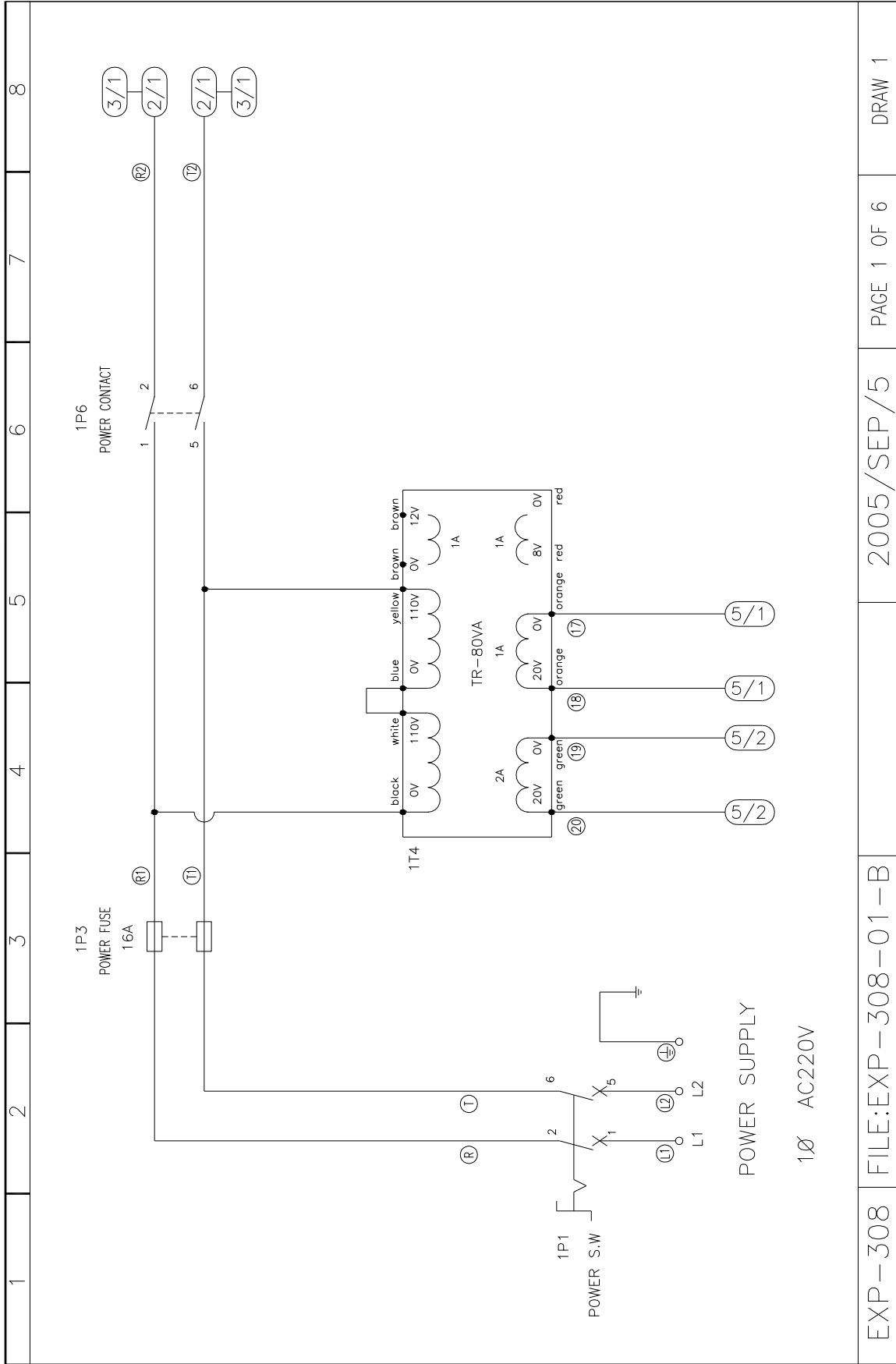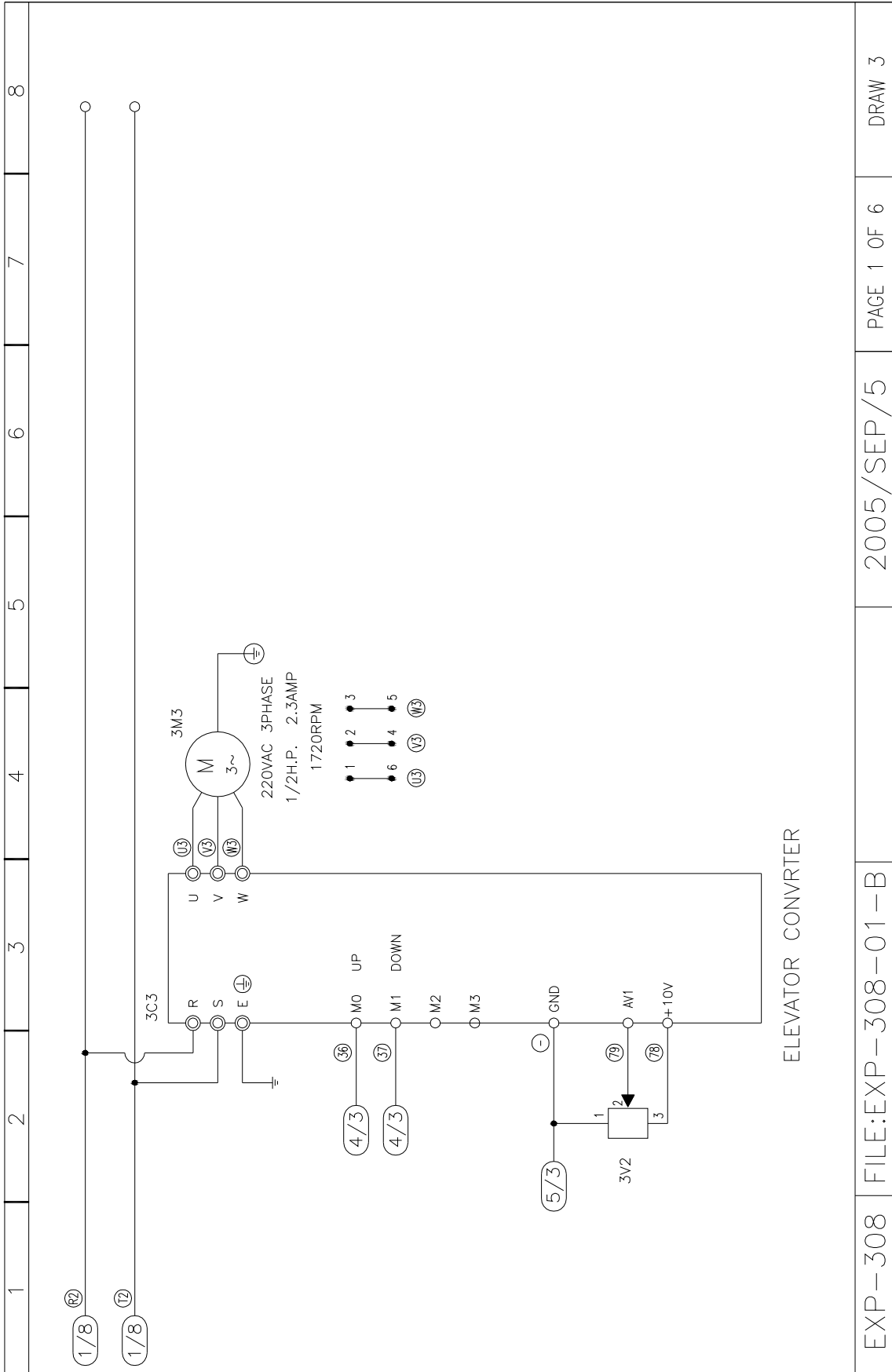
EXP-308 | FILE:EXP-308-01-B | 2005/SEP/5 | PAGE 1 OF 6 | DRAW 2

MICROPROCESSOR CARD

J3 INPUT

	X0	X1	X2	X3	X4	X5	X6	X7	X8
	⓪	①	②		④	⑤	⑥		60

X0 NC COM — ELEVATOR UP LIMIT

X1 NC COM — ELEVATOR DOWN LIMIT

X2 YELLOW RED / BLACK AND BROWN — PHOTO SENSOR ELEVATOR

X4 BLACK BROWN / BLUE — INITIAL POSITION PROXIMITY

X5 3 4 — START BUTTON

X6 3 4 — PAUSE BUTTON CARRIAGE

X8 — 6/7

5/3 (−)

(−)

(+)

MICROPROCESSOR CARD

J6 OUTPUT

Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8
				34	35	36	37	38

Y4 — 2/5 — RUN TURNTABLE

Y5 — 2/5 — LOW SPEED TURNTABLE

Y6 — 3/3 — UP ELEVATOR

Y7 — 3/3 — DOWN ELEVATOR

Y8 — L1 — START LAMP

5/3 (+)

20

MICROPROCESSOR CARD

J1 POWER INPUT

0V	20V	0V	20V
⑰	⑱	⑲	⑳
1/5	1/5	1/4	1/4

J2 OUTPUT

DC0V		DC24V
−		+
	2/5	4/1
	3/2	6/4
	4/4	5/7
	6/4	

PANEL

J8 —— J1

J9 —— J3

J5 —— J2

J4 INPUT

| X10 | X11 | X12 | X13 | X14 | X15 |

J7 OUTPUT

| Y10 | Y11 | Y12 |

⑫42

5R8 A2 / A1

TURNTABLE BRAKE

5/3 (+)

POWER RELAY

4/8

POWER ON

A1
6R7
A2

60

1
EMG
NC
2

X8

61

X8-1
21
NC
BOX KEY
22

62

X8-3
N0
FOOT SECURITY BAR
COM

+
5/3

-
5/3

ELECTRIC PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	Q'TY
1	75811802	PANEL CARD	1
2	7150BW33	AUTO RUN GREEN LAMP - COVER	1
3	7150BW61	AUTO RUN GREEN LAMP - SEAT	1
4	7150CE24	AUTO RUN LAMP - LAMP	1
5	7158BZ11	KNOB CONTACTOR	1
6	7155BA70	BUTTON - WHITE	1
8	71610002	KNOB RN-99F	2
9	75510002	VARIOUS RESISTOR 5K	2
10	7155BC20	EMG. SWITCH	1
11	7158BZ12	KNOB CONACTOR	1
12	7170CA01	MAIN POWER SWITCH	1
13	73050204	INVERTOR 110V	2
13	73050206	INVERTOR 220V	2
14	72801003	TRANSFORMER TR-80VA	1
15	72600006	CONTACTOR	2
16	72571601	SWITCH C60A2PC16A	1
18	72560201	FUSE 2A/250V	1
19	75843801	EPROM	1
20	75823801	MICROPROCESSOR CARD	1
21	7055TC05	TERMINAL POST	1
22	72810002	POWER SUPPLY S-35-24	1
23	7159NC02	CONTACTOR	1
26	70560601	TERMINAL BLOCKS TB6P	1
27	7149506A	DIODE 50V,6A	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 VL-8108	2
34	7350TZ02	LIMIT SWITCH ML-7110	1
35			
36	72560101	FUSE 1A/250V	1

5. TROUBLE SHOOTING

5.1 GENERAL ADJUSTMENT

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.

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
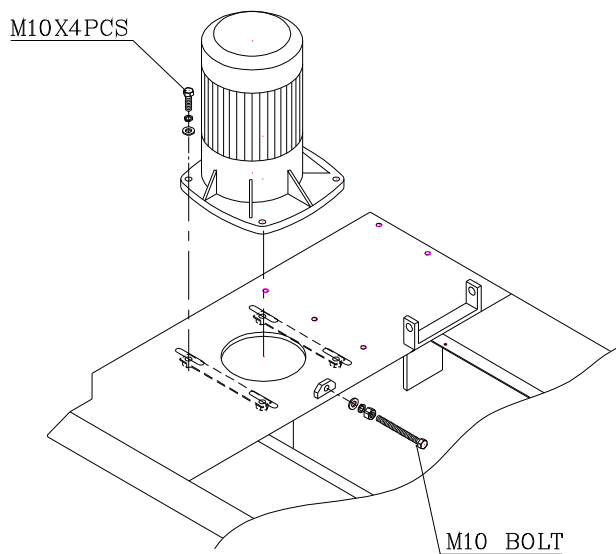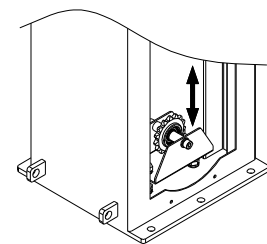
FIG.5-1   FIG.5-2

*MICROPROCESSOR CARD DESCRIPTION AND INSTALLATION

DESCRIPTION
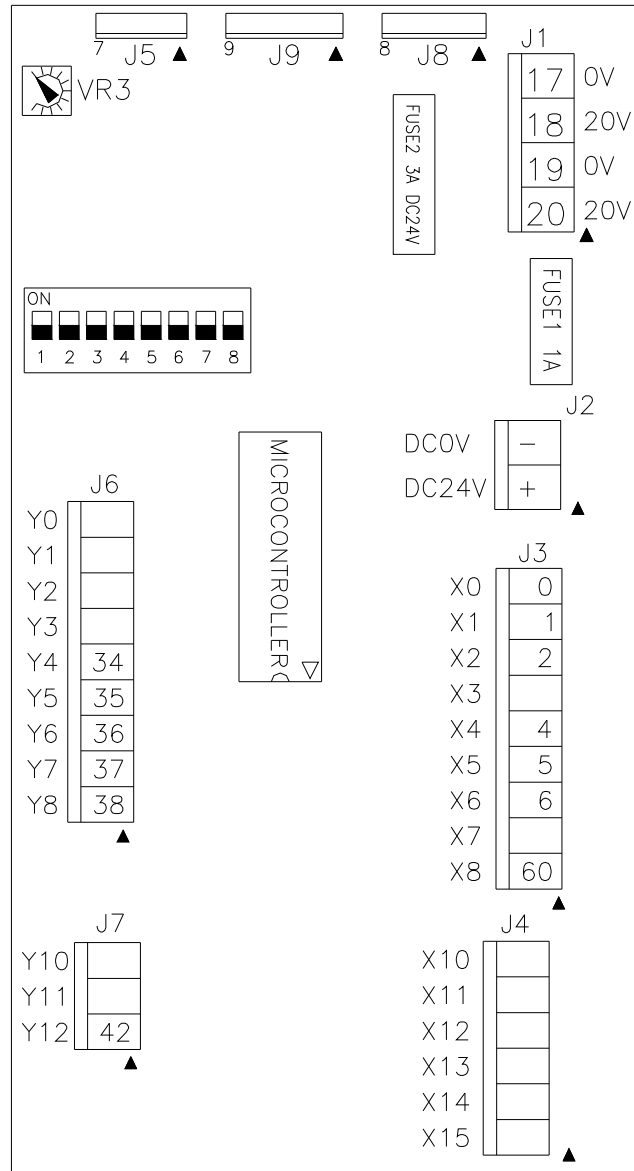
MICROPROCESSOR

DESCRIPTION OF CONNTECTING POINTS

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

Y4	TURNTABLE START
Y5	TURNTABLE LOW SPEED
Y6	CARRIAGE RISING
Y7	CARRIAGE LOWERING
Y8	START LAMP
Y12	TURNTABLE BREAK

XO	CARRIAGE UP LIMIT
X1	CARRIAGE DOWN LIMIT
X2	CARRIAGE HEIGHT PHOTO SENSOR
X4	TURNTABLE ALIGNMENT PROXIMITY
X5	START BUTTON
X6	REINFORCE PACKAGING BUTTON
X8	POWER CUT CIRCUIT #60

Master Card Testing Procedure with Toggle Switch On/Off for EXP-308

```
ON      STR
┌─┬─┬─┬─┬─┬─┬─┬─┐
│█│█│█│ │█│█│█│ │
└─┴─┴─┴─┴─┴─┴─┴─┘
 1 2 3 4 5 6 7 8
```

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 N/A

#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**
E2 Carriage Height photo sensor	**X2**
E4 Turntable alignment sensor	**X4**
E1 Carriage down limit	**X1**

Toggle Switch 5 display code explanation
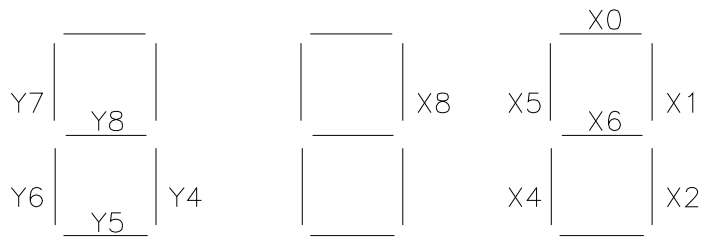
X0	CARRIAGE UP LIMIT
X1	CARRIAGE DOWN LIMIT
X2	CARRIAGE HEIGHT PHOTO SENSOR
X4	TURNTABLE ALIGNMENT SENSOR
X5	START BUTTON
X6	REINFORCE PACKAGING BUTTON
X8	POWER CUT CIRCUIT#60

Y4	TURNTABLE START
Y5	TURNTABLE LOW SPEED
Y6	CARRIAGE RISING
Y7	CARRIAGE LOWERING
Y8	START LAMP

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 button.

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 foot security bar of carriage is activated properly.

5.4 TROUBLE SHOOTING

Machine trouble	Cause	Solution
Machine can not work	Power supply for motor is tripped Screen lamp not ON. Foot security is broken. Motor is overload	Activate 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 (VR3). 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.

6. PART LIST

6.1   SEAT
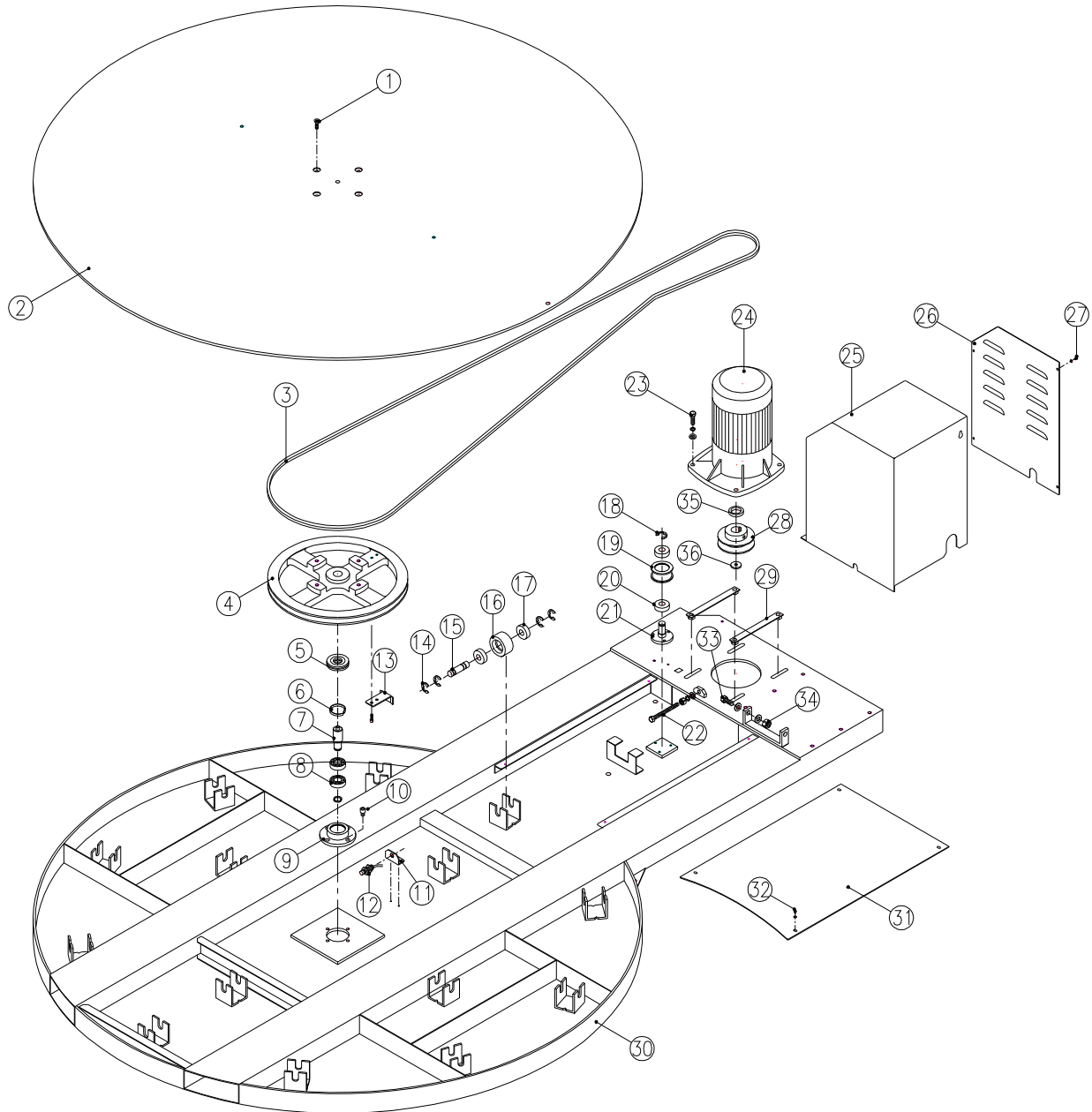
PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	Q'TY
1	10141020	SCREW M10x20L	4
2	PJ10120A	1.65 M TURNTABLE	1
	PJ10121A	1.5 M TURNTABLE	1
	PJ10122A	1.8 M TURNTABLE	1
3	201BX151	BELT→1.65M	1
	2010B148	BELT→1.5M	1
	201BX157	BELT→1.8M	1
4	PJ10070A	PULLY	1
5	30371108	BEARING 51108	1
6	11314200	RING RTW-42	1
7	PD10070A	BELT PULLY SHAFT	1
8	30300040	BEARING 6004ZZ	2
9	PD100900	BELT PULLEY BEARING SEAT	1
10	10101016	SCREW	4
11	PJ100300	SENSOR SEAT	1
12	7355N109	PROXIMITY SENSOR(PM12-04N-3M)	1
13	PJ100400	SENSOR PLATE	1
14	11301700	RING STW-17→1.65M	56
		RING STW-17→1.5M	48
		RING STW-17→1.8M	72
15	PA100900	SUPPORTTING PLASTIC WHEEL SHAFT→1.65M	14
		SUPPORTTING PLASTIC WHEEL SHAFT→1.5M	12
		SUPPORTTING PLASTIC WHEEL SHAFT→1.8M	18
16	PA101000	SUPPORTTING PLASTIC WHEEL→1.65M	14
		SUPPORTTING PLASTIC WHEEL→1.5M	12
		SUPPORTTING PLASTIC WHEEL→1.8M	18
17	30302030	BEARING 6203ZZ →1.65M	28
		BEARING 6203ZZ →1.5M	24
		BEARING 6203ZZ →1.8M	36
18	11301700	RING STW -17	1
19	PJ101000	BELT PULLY BEARING SEAT	1
20	30302030	BEARING 6203ZZ	2

PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	Q'TY
21	PJ101100	BELT PULLY BEARING SHAFT	1
22	10111060	SCREW M10x60L	1
23	10111035	SCREW M10x35L	4
24	32903005	GEAR REDUCER MOTOR→1.65M;1.5M	1
	32903006	GEAR REDUCER MOTOR→1.8M	1
25	PJ100800	MOTOR BOX	1
26	PJ100900	MOTOR BOX COVER	1
27	10190406	SCREW	4
28	PJ100600	MOTOR BELT PULLY	1
29	PJ100500	FIXED PLATE	2
30	PJ100100	TURNTABLE SEAT→1.65M	1
	PJ100110	TURNTABLE SEAT→1.5M	1
	PJ100120	TURNTABLE SEAT→1.8M	1
31	PJ100200	COVERING PLATE	1
32	10190406	SCREW M4x6L	4
33	10111235	SCREW M12x35L	2
34	10331200	SCREW M12	2
35	PJ101500	RING	1
36	KA1102310	WASHER	1

PARTS LIST FOR EXP-308

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			
11			
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	10181060	SCREW M10x60L	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
26			
27	PJ200600	FIXED PIECE	1

PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	Q'TY
28	PJ200400	SPINDLE SUPPORT	1
29	PJ200800	SHAFT	3
30	PJ201100	RING	2
31	PJ200900	CHAIN WHEEL	6
32	30302030	BEARING 6203ZZ(CWB)	6
33	PJ201000	RING	6
34	10250616	SCREW M6x16L	6
35	PJ200700	UPPER CHAIN WHEEL SEAT	1
36	10240610	SCREW M6*10L	4
37	PJ201100	RING	4

6.3   ELEVATOR
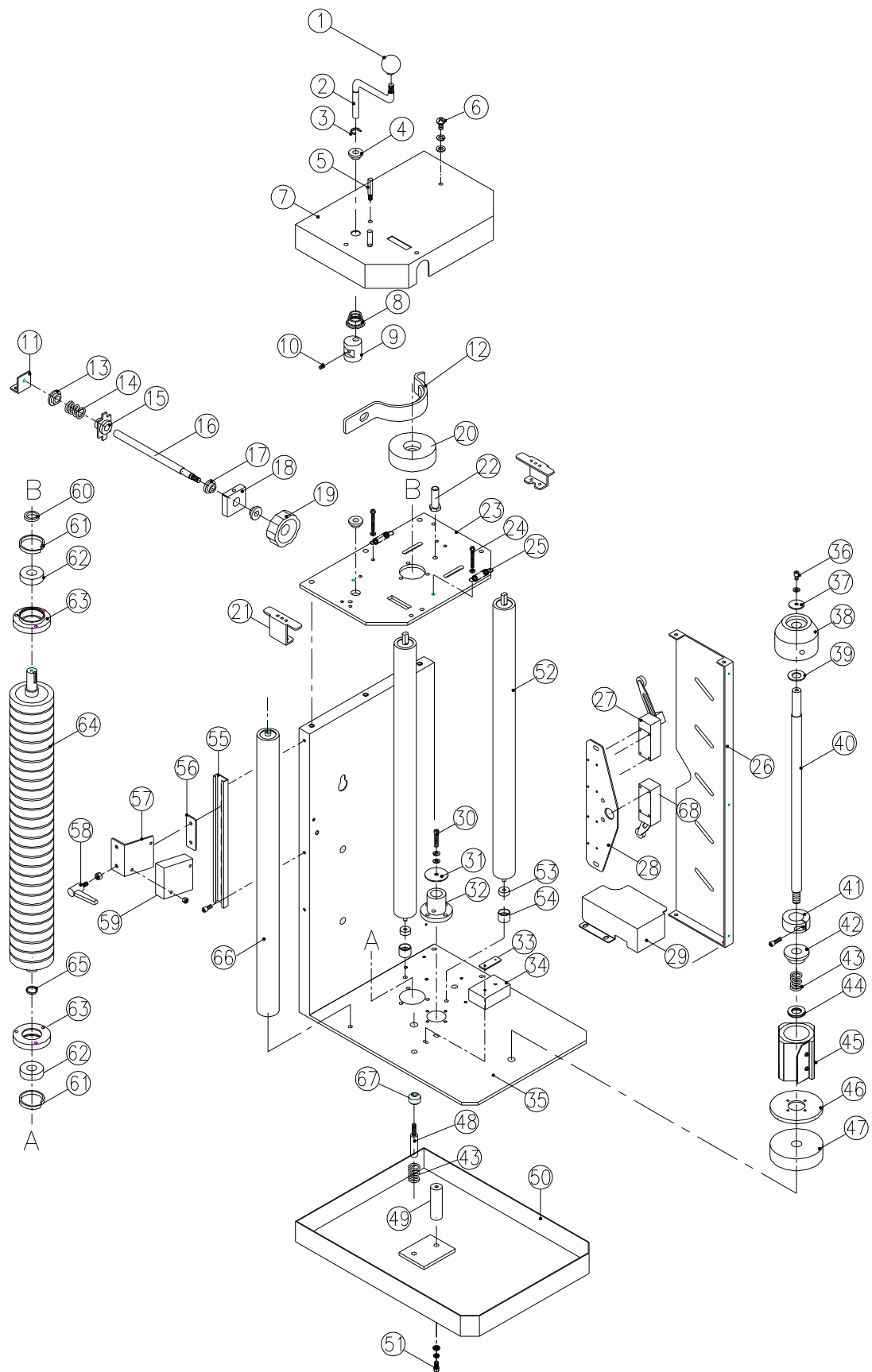
PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	QTY.
1	91220001	HANDLE-M8 THEETH	1
2	PJ352400	HANDLE	1
3	11301000	C-RING S-10	1
4	PD201700	RING	2
5	PJ352500	SPRING PLUNGERS	2
6	10240610	SCREW M6*10L	2
7	PJ35050A	COVER	1
8	PJ352600	SPRING	1
9	PD201600	WHEEL	1
10	10180610	SCREW M6*10L	1
11	PJ350600	FIXED BOARD	1
12	PJ351300	BRAKE PLATE	1
13	PJ351600	BLOCK RING	1
14	PD203610	STRECTH SPRING	1
15	PJ352300	TENSION ADJUST SEAT	1
16	PJ351000	TENSION ADJUST SCREW	1
17	PD201700	RING	2
18	PD201800	GEAR SCREW FIX SEAT	1
19	91250001	HANDLE	1
20	PJ351200	BRAKE WHEEL	1
21	PJ35140A	COVER PLATE	2
22	PJ35110A	BRAKE SHAFT	1
23	PJ35040A	ELEVATOR UNIT UPPER SEAT	1
24	10130545	SCREW M5*45L	2
25	PJ352700	ROLLER SPRING	2
26	PJ35030A	SIDE COVER	1
27	7350TZ04-D	LIMIT SWITCH TZ-8108	1
28	PJ352900	LIMIT SEAT	1
29	PJ35170A	TERMINAL COVER	1
30	10250616	SCREW M6*16L	1
31	PJ306500	SAFETY GUARD	1
32	30392020	LINEAR BUSHING	1
33	PJ308600	FIX PIECE	1
34	7350TZ02	LIMIT SWITCH TZ-7110	1

PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	QTY.
35	PJ35010A	CARRIAGE	1
36	10250616	SCREW M6*16L	1
37	PJ306500	SAFETY GUARD	1
38	PJ303900	UPPER FIXED RING	1
39	PJ305100	RING	1
40	PJ303700	FILM SEAT SHAFT	1
41	PM302900	ADJUST RING	1
42	PM300600	LOWER FIXED RING	1
43	PM302410	SPRING	2
44	30361730-01	BEARING NTB1730 (TPX)	1
45	PM30050A-01	FILM FIX SEAT	1
46	PM30050A-03	FILM BREAK PLATE	1
47	PJ304100	FRICTION SEAT	1
48	PJ307800	SENSOR IDLE	1
49	PJ30270A	PEDAL SHAFT	1
50	PJ35020B	SAFETY PEDAL (P-308)	1
51	10140820	SCREW M8*20L	1
52	PJ351500	ROLLER ASSY.	2
53	30350PB6	BALL BEARING	2
54	PJ304200	UNIVERSAL BEARING SEAT	2
55	PJ350800	TRACK PLATE TBC-N	1
56	PJ350700	FIXED PIECE	1
57	PJ350900	PHOTO SENSOR SEAT	1
58	91280002	HANDLE BAR 6x13	1
59	73602M02	PHOTO SENSOR A3R-2MX	1
60	PJ301200	RING INSOLATED	1
61	11311200	C-RING R-42	1
62	30302030	BEARING 6203ZZ	2
63	PJ300700	BEARING SEAT	2
64	PJ301300	PRE-STRETCH ROLLER	1
65	11301700	C-RING S-17	1
66	PJ351900	ROLLER ASSY.	1
67	PJ307900	RING	1
68	7350TZ04-U	LIMIT SWITCH TZ-8108	1

6.4   CONTROL BOX

PARTS LIST FOR EXP-308

KEY NO	PART NO	DESCRIPTION	Q' TY
1	PJ400400	SUPPORTING TUBES	2
2	PJ400500	SUPPORTING SEATS	2
3	10100840	SCREW M8x40	8
4	PJ400100	ELECTRICAL BOX	1
5	PD400520	HINGE	2
6	PJ400300	WIRING PLATE	1
7	PD400610	PLATE	2
8	PJ450200	ELECTRICAL BOX DOOR	1
9	PA201810-01	LOCK	2
10	10190425	FLAT PHILIP SCREW M4x25L	1
11	PB400400	CIRCUIT BEAKER KEY	1
12	PA202100	SPRING	2
13	10330400	LOCK NUT	2
14	10130435	ROUND PHILIP SCREW M4x35L	4
15	7365P002	CIRCUIT BEAKER KEY	1
16	10130412	ROUND PHILIP SCREW M4x12L	2
17	PD400400	SECURITY SWITCH SEAT	1