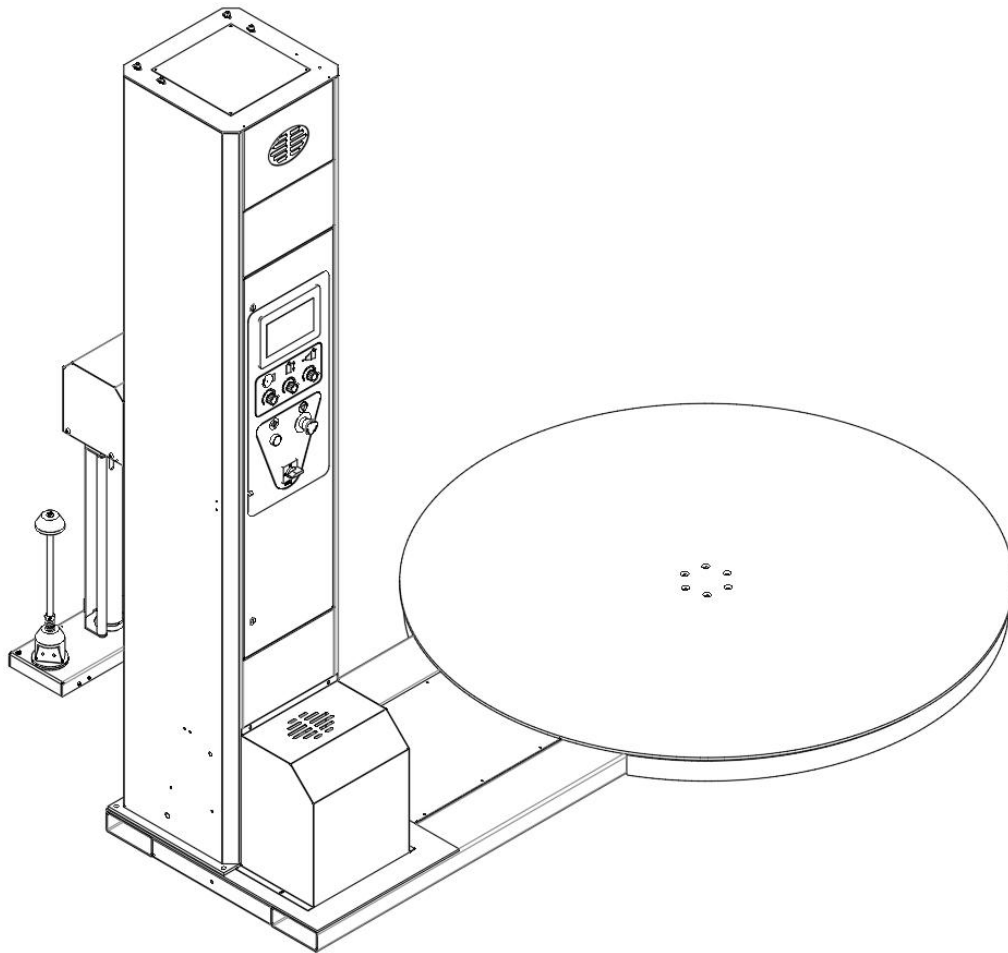


# Semi-Auto Low Profile Pallet Wrapper

## User Manual

Model NO: 238508



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Machine Dimension

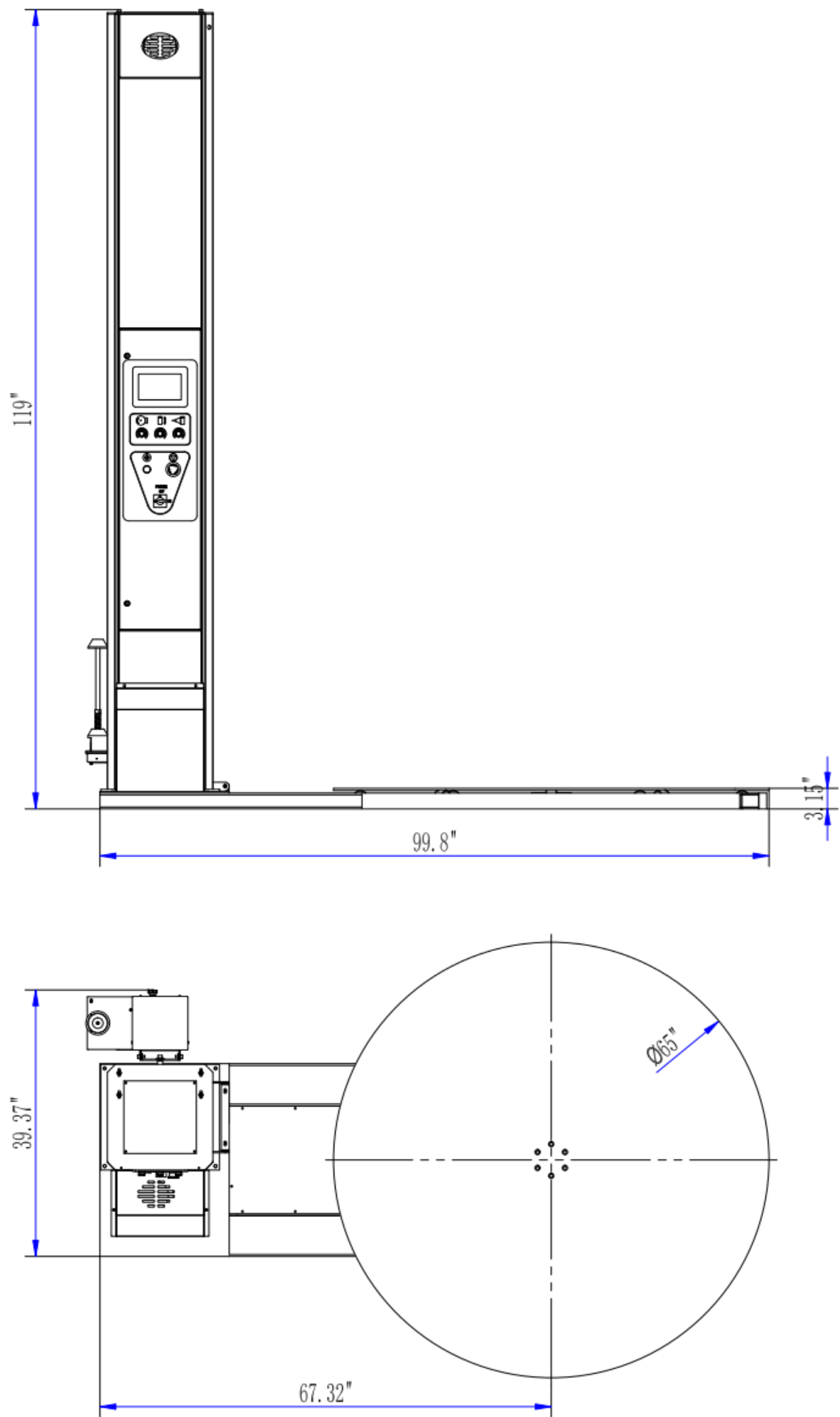


Figure 1

# 1. System Specification

## Machine Dimension

(See Figure 1)

|                             |                  |
|-----------------------------|------------------|
| Length                      | 96.5"            |
| Width                       | 59"              |
| Height                      | 89.4"            |
| Turntable Diameter          | 59"              |
| Turntable Height from Floor | 5.12"            |
| Wrapping Height             | 112"             |
| Operation Space             | 97" x 60" x 112" |
| Maximum Load Size           | 52" x 52" x 112" |

## Electrical Specification

- 120V 60HZ Single-Phase
- Power Supply: 1000W

## Turntable System

- 13RPM turntable maximum speed
- 4400 lbs turntable maximum load capacity
- 1-13 rounds/minute
- Clockwise rotating turntable direction

## Film Delivery System

- Infinite/Manual Tension Adjustment
- 10" Diameter Roll Capacity
- 3" inner film roll diameter
- 20" Roll width Capacity

## Machine Features

- Programmable logic controller (PLC) user interface
- 6 Modes: that's 5 automatic modes+1 manual mode
- The film carriage adopts close loop self-adjusting technology, to ensure each package is evenly wrapped
- Allowable package weight (22lbs-4400lbs)
- SAFETY: The machine has an emergency stop button & sensor underneath the film carriage. Once an object is detected underneath the moving film carriage, the machine will stop.
- The interval between 2 wrapping operations is required to more than 3 minutes.



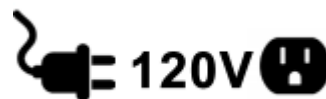
### CAUTION!

When servicing drive and controllers, they may be exposed components with housing or protrusions at or above the line potential. Extreme care should be taken to protect against shock.

The user is responsible for conforming to all applicable code requirements with respect to grounding requirements. Do NOT use extension cords to operate the equipment.

Disconnect AC input power when the machine is not in use and before checking components, performing maintenance, cleaning up and. Do NOT connect or disconnect wires and connectors while power is applied to the circuit.

Always plug into a grounded outlet with the rated voltage.



### WARNING!

Loose clothing must NOT be worn while the machine is in operation. Stay clear of moving parts while the machine is running.

- For industrial and indoor use only.
- Do not immerse in water.
- To Reduce the Risk of Electric Shock and Injury to Persons, Disconnect from Power Supply Before Servicing and Opening.
- To provide continued protection against risk of electric shock, connect to properly grounded outlets only.
- Any servicing should be performed by an authorized service representative AND that the product has no user serviceable parts.
- The door lock can only be opened by authorized service personnel.

## 2. System Set-up

### Machine Placement

Place the semi-automatic Stretch Wrap Machine close to an area where you will be wrapping your pallet loads. Refer to figure 2 to insure the machine meets the minimum clearance space requirements. Make sure that there is sufficient room to load/unload the machine and that you do not stretch the wiring cable. Remember, you will need to provide electrical service to 120 VAC, 9.1-AMP outlet. (see Figure 2)

### Floor Weight Bearing Tolerance

The floor must be able to bear the weight of the machine, the weight of the maximum load, plus a safety factor. The floor must also be able to tolerate the stress of the machine operation. If the truck will operate on the same weight bearing area, add the weight of the trucks to the weight bearing stress tolerance requirement.

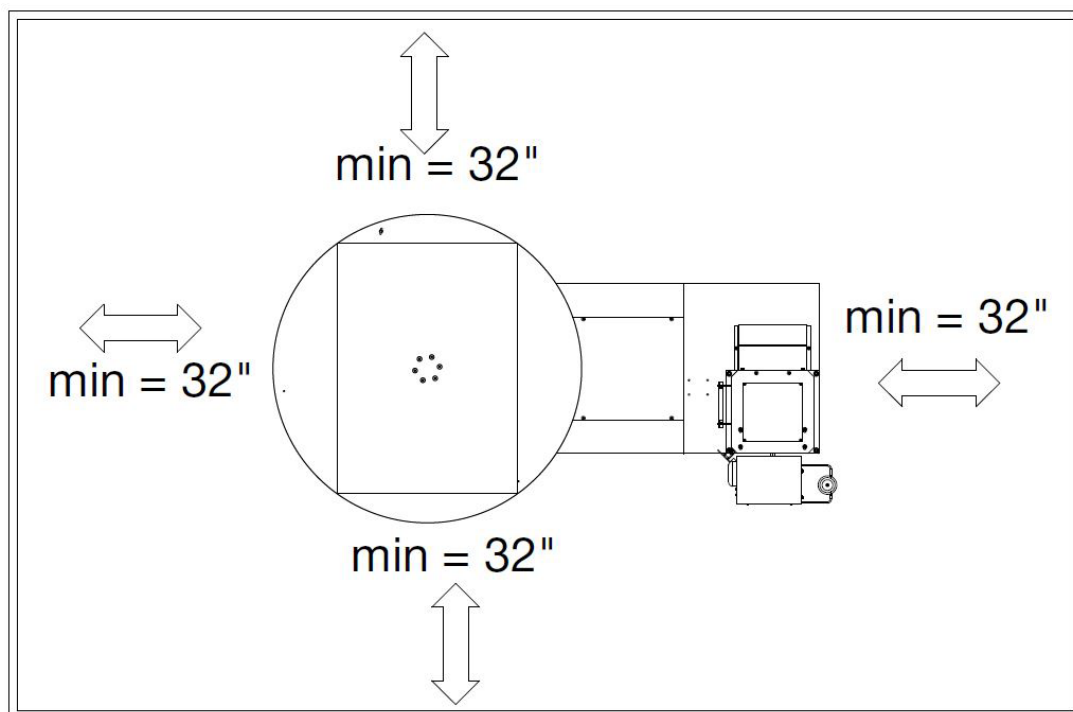


Figure 2

## 2.1 Machine Set-up

1. Place the crated machine close to the designated wrap area. Remove all shipping fasteners holding the machine to the pallet. The machine may be crated with the tower tilted down the motor cover front carriage roller removed for shipping purpose.
  2. Place forks of the forklift through the tubes provided at the rear base of the module, remove the machine from crate and place it at the designated wrap area.
  3. Check all internal connections to ensure there is no loose/disconnected electrical wiring.
  4. Connect the motor wiring and sensor leads according to the corresponding wire numbers.
  5. If the OPTIONAL ramp (Model NO: 241021) is purchased: Select a ramp position illustrated below. The ramp can be positioned anywhere in a 180 rotation around the front of the turntable. There should be a 1/4" gap between the turntable and the ramp. The ramp should be fully supported by the floor.
- (See Figure 3)

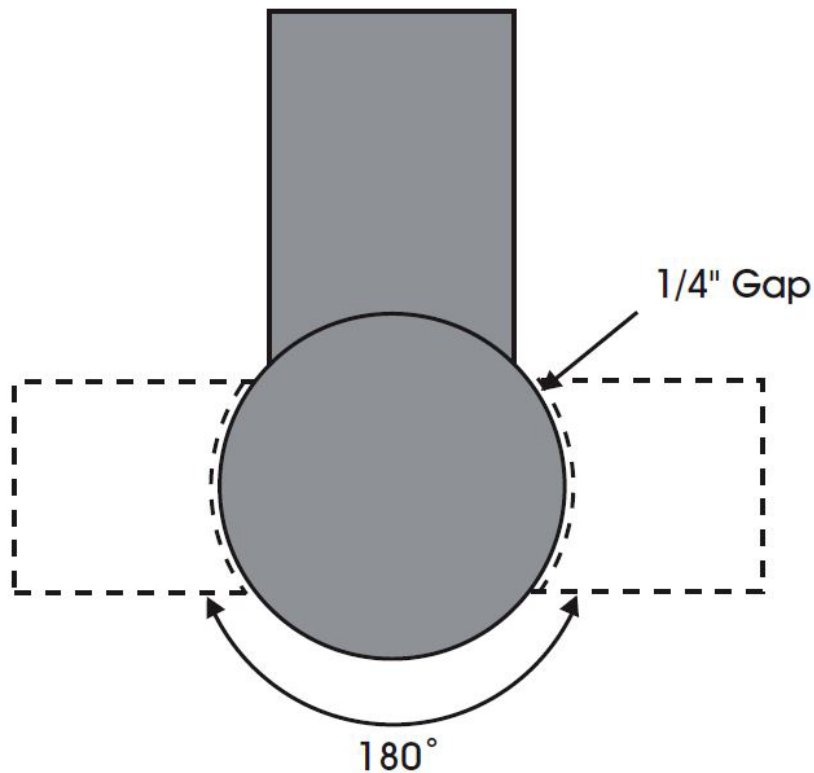


Figure 3

## 2.2 Installation

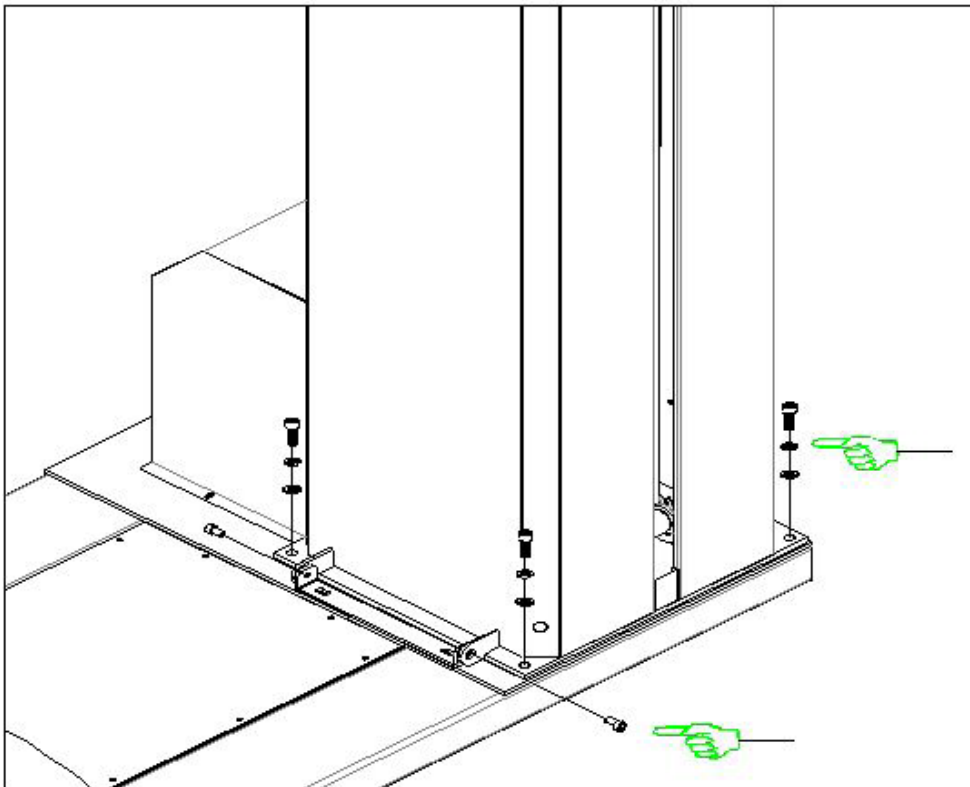
**NOTE:** Installation requires two people



### CAUTION

Be careful when standing on the turntable during the installation, as it may turn when rotational force is applied.

1. Raise the tower upright safely with two people.
2. Tighten the screws between the tower and the turntable base (See Figure 4)
3. Screw the film carriage into the post (See Figure 5)
4. Connect to the power supply and perform a ground test before using the machine.



Screw the set of **(4)** screws, washers, and lock washers through the tower and into the turntable base securely.  
**(M10 x 20 screw)**

Screw the set of **(2)** screws connecting the tower and turntable  
**(M8 x 10 screw)**

Figure 4

Mount the film carriage  
onto the post by fastening a  
set of (2) screws.  
**(M8 x 20 screw)**

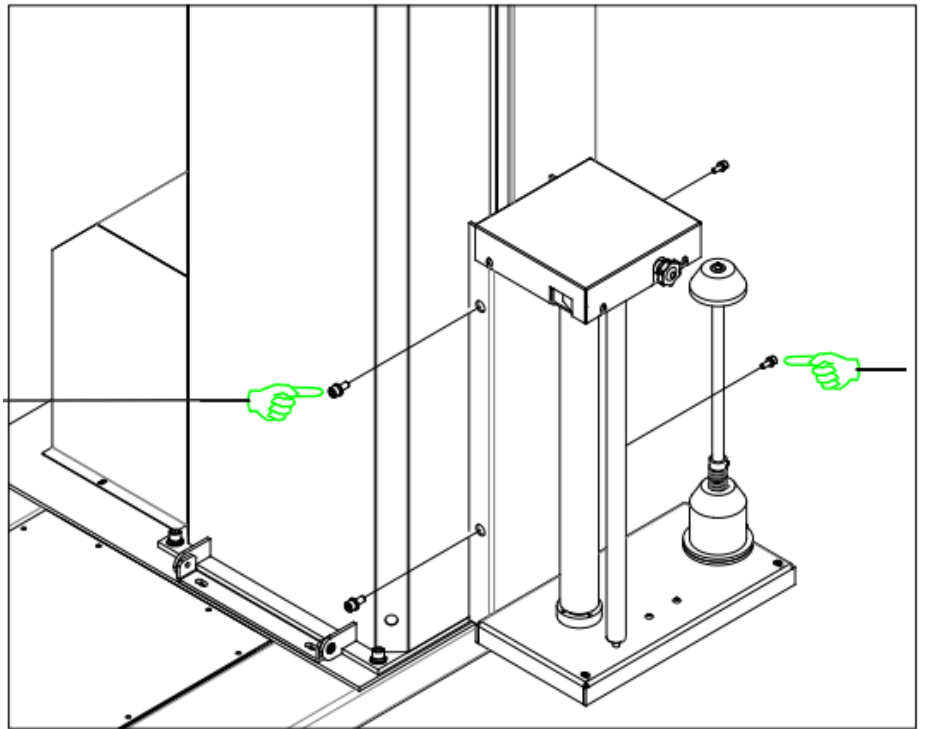


Figure 5

### 3. Control Panel Buttons

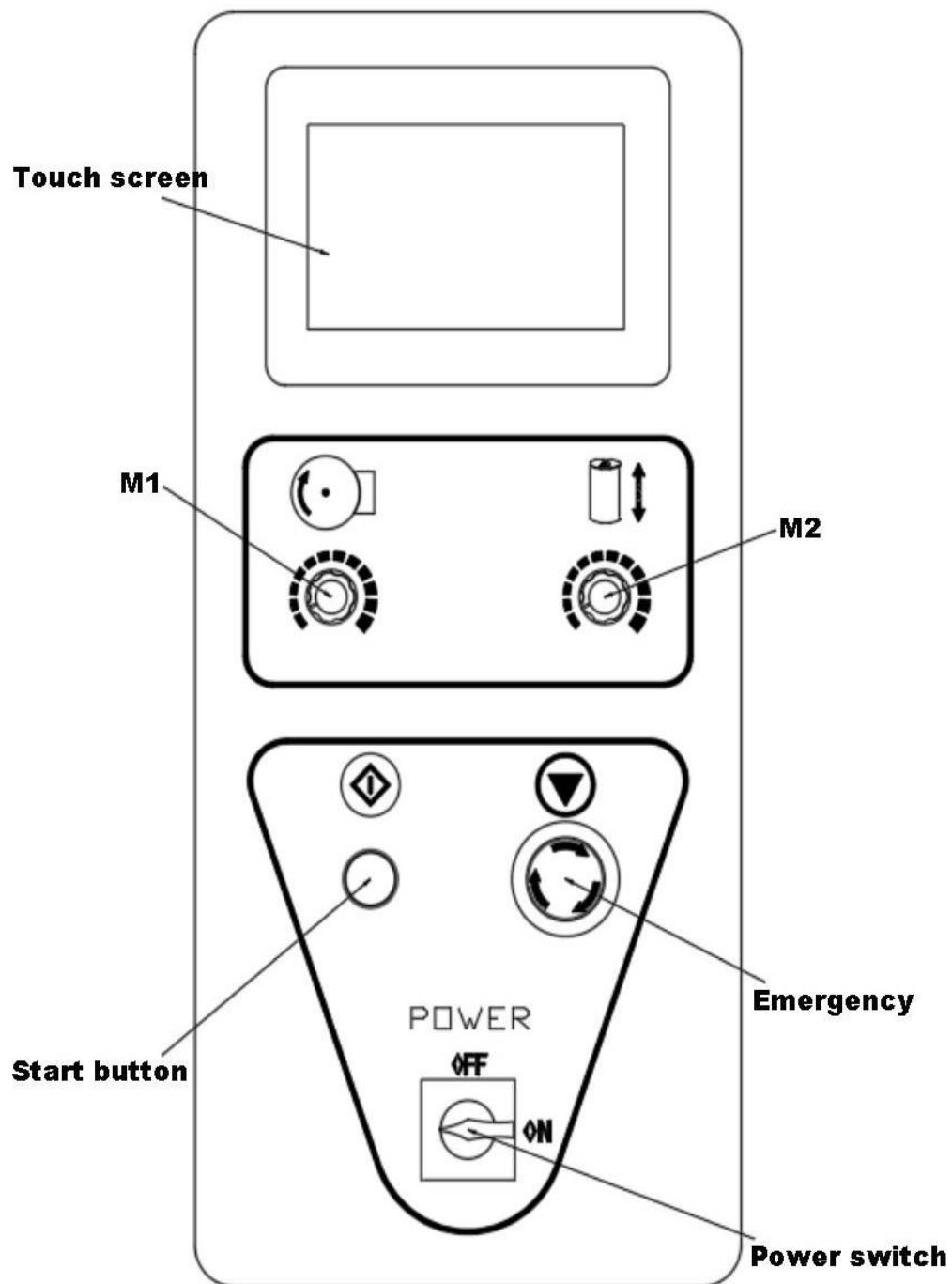


Figure 6

**Speed Controller by M1, M2 knob**

M1: Control the speed of the turntable motor. The speed range 1-10 rpm.

M2: Control the lifting motor speed

**Start Button has three functions**

The start of the automatic mode starts

Resume after emergency stop

Use/Cancel the central reinforcement

**Emergency Stop Button**

Press the emergency stop button to stop the machine immediately. Press the button when any emergency occurred during the packaging process. Turn the emergency stop button clockwise to reset the emergency stop button.

**Power Switch**

OFF, Power off the machine

ON, Power on the machine

## 4. Operator Controls

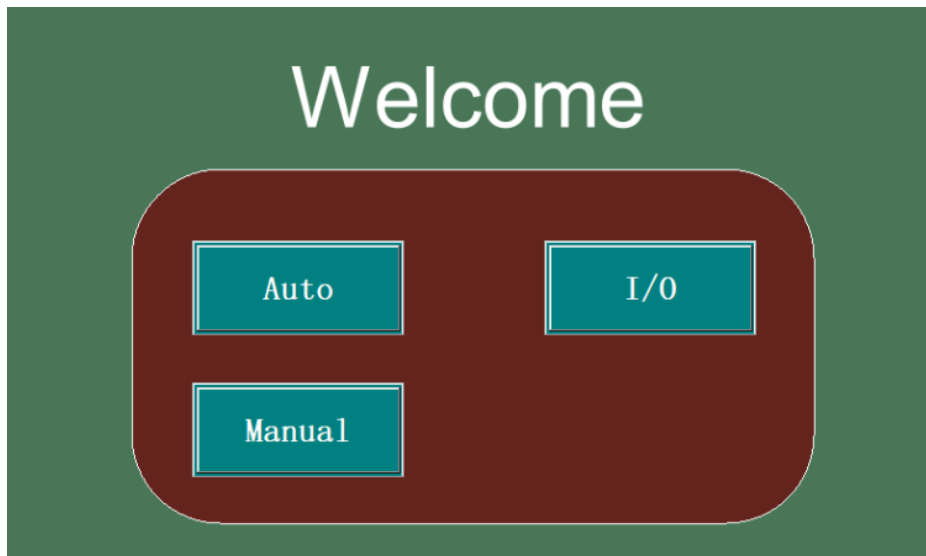


Figure 7 Main Menu Display

### 4.1 Manual

Press the manual interface button in the main menu to display the manual operation. (See Figure 8)

#### **Carriage up/Carriage down**

Manually operate the carriage to move up or down. When this function is pushed, the button will turn green. To pause the operation, simply push the button again. This button may be used in conjunction with the turntable start button.

#### **Turntable Start**

The turntable Start button allows you to manually operate the turntable. When this button is pushed, the button will turn green. Pushing the button again will stop the turntable. The button may be used in conjunction with Carriage up/down button.

#### **Reset**

Push the Reset button to reset the system operation. The Turntable will return to its home position and the carriage will lower to the initial position.

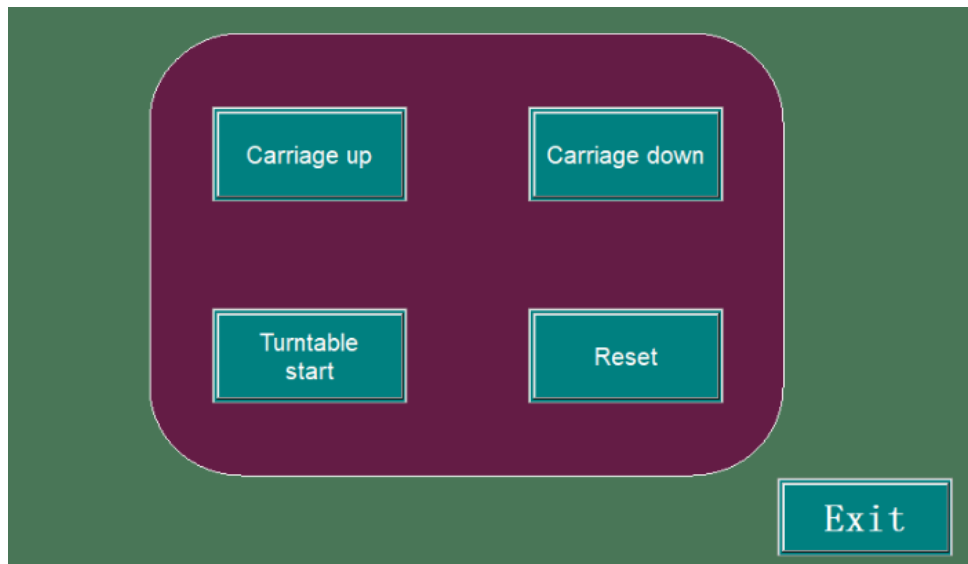


Figure 8 Manual Display

## 4.2 Auto

Press the AUTO button in the main menu to set parameters through the interface shown in figure 9.

The parameters can be set according to the following packaging requirements: Bottom laps, Top laps, lifting time, strengthening laps, film cutting time and electric eye delay. Press the white box to set each parameter through the pop-up numerical keyboard followed by pressing the Enter button.

Once the parameters are set, click the “Save” button on the screen to store the parameters for assigned group number. A total of five sets of parameters can be stored. To use any of the saved parameters, select the group number. (See Figure 9)

NOTE: The parameters and function settings cannot be changed when the machine is running.

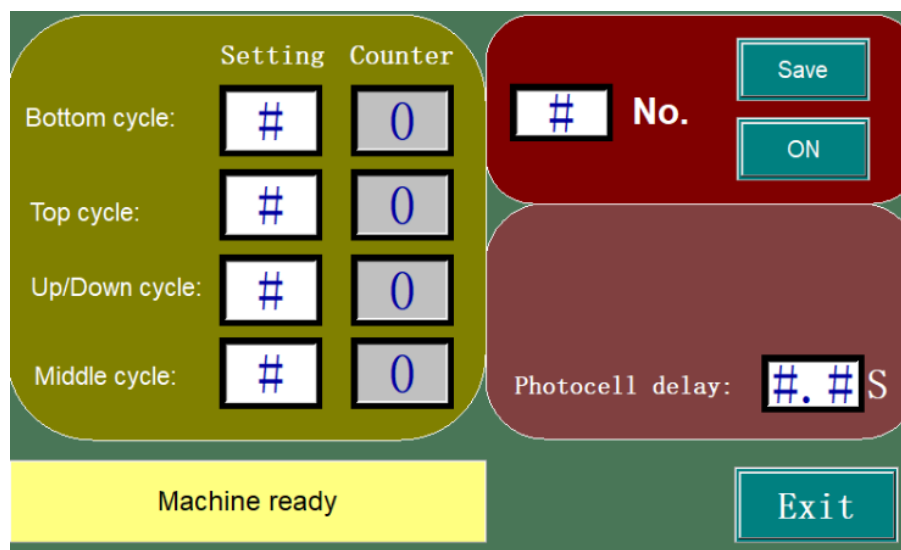


Figure 9 Auto Display

### 4.3 Input & Output (I/O)

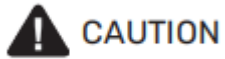
You can check the status of all sensors and switches on the I/O interface shown in Figure 10. This display can be used for routine maintenance on the machine. (See Figure 10))

To return to the main menu, press the EXIT button.

|                          |                          |                                |                          |                       |                          |
|--------------------------|--------------------------|--------------------------------|--------------------------|-----------------------|--------------------------|
| X0 Photocell             | <input type="checkbox"/> | X8 Emergency                   | <input type="checkbox"/> | Y2 Film carriage up   | <input type="checkbox"/> |
| X1 Proximity switch      | <input type="checkbox"/> | X9 Carriage up limit 2         | <input type="checkbox"/> | Y3 Film carriage down | <input type="checkbox"/> |
| X2 Height sensor         | <input type="checkbox"/> | X10 Carriage down limit 2      | <input type="checkbox"/> | Y4 Pre-stretch motor  | <input type="checkbox"/> |
| X3 Press up limit        | <input type="checkbox"/> | X11 Turntab inverter alarm     | <input type="checkbox"/> | Y5 Press unit up      | <input type="checkbox"/> |
| X4 Press down limit      | <input type="checkbox"/> | X12 Carriage inverter alarm    | <input type="checkbox"/> | Y6 Press unit down    | <input type="checkbox"/> |
| X5 Carriage up limit 1   | <input type="checkbox"/> | X13 Pre-stretch inverter alarm | <input type="checkbox"/> | Y7 Spare              | <input type="checkbox"/> |
| X6 Carriage down limit 1 | <input type="checkbox"/> | Y0 Turntable fast speed        | <input type="checkbox"/> | <div>Exit</div>       |                          |
| X7 Auto start            | <input type="checkbox"/> | Y1 Turntable slow speed        | <input type="checkbox"/> |                       |                          |

Figure 10 I/O display

## 4.4 Film Loading



Be sure EMERGENCY STOP is pushed in before threading the film and pulled out when the film is threaded.

1. Load the film roll in the film carriage (See Figure 12)
2. Follow the film feed diagram and thread the film all the way through the rollers (See Figure 13)
3. Attach the film securely to the pallet. Tying the end of the film in a knot often helps secure the film to the pallet.
4. Turn the emergency stop switch clockwise and turn the power on.

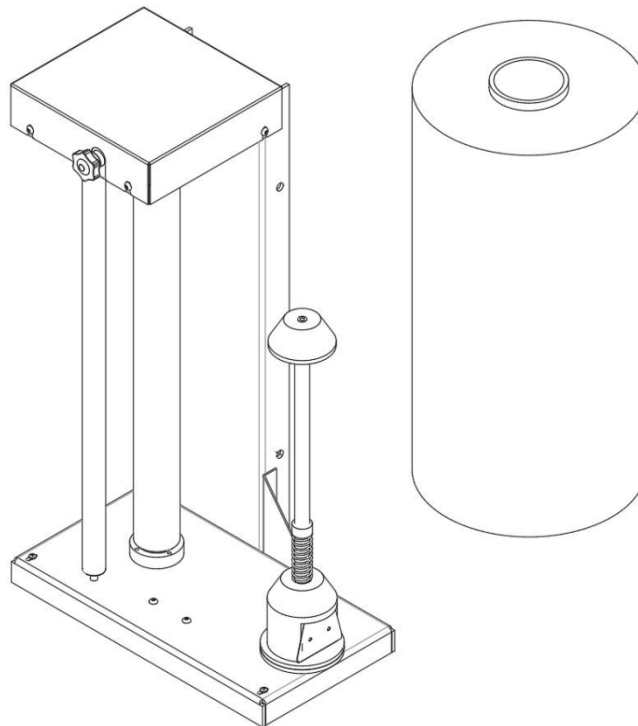


Figure 12

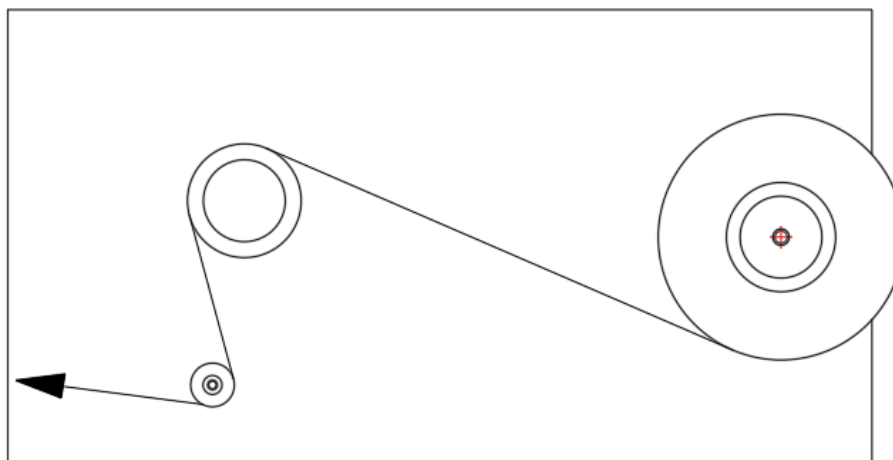


Figure 13

## 4.5 Machine Operation

### Trial run-Normal System Start-Up:

1. Place the Packaged pallet on the machine turntable until touch the positioning stopping plate.
2. Thread the film as instructed and attach it to the product.
3. Turn the power on.
4. Adjust the sensitivity of the photo switch. The machine is adjusted to the factory setting before delivery.
5. Select either Manual or Auto mode to achieve the user's packaging requirement.
6. Press the START button to initiate cycle.

NOTE: It is recommended to tray a trail run to become familiar with the various parameters, adjustments, and speed controls.

### Emergency Stop Condition.

1. In the event of an emergency, press the STOP button. This cancels the current wrapping cycle and immediately stops the system. Figure 15 will display on the screen.
2. Correct the problem
3. Turn the STOP button clockwise to reset the stop button and perform the normal system start-up procedure.

NOTE: If the weight of the package exceeds 1,100lbs, turn the turntable adjustment knob M1 counterclockwise prior to pressing the emergency stop button.

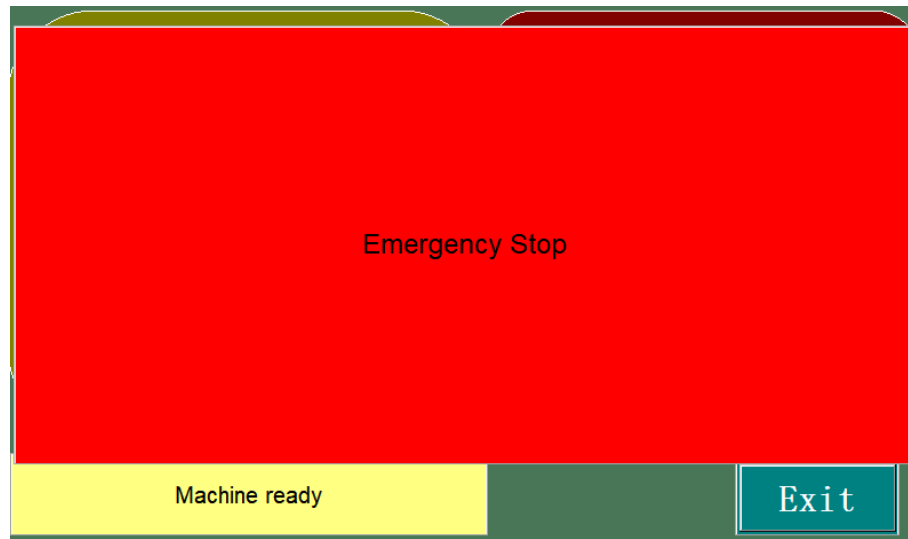


Figure 15

## Operation

1. Load the film roll in the film carriage and thread the film according to Figure 13
2. Turn the power on.
3. Adjust the sensitivity of the photo switch. The machine is adjusted to the factory setting before delivery.
4. Adjust the parameter according to the packing requirements.
5. Trial run: Place the packaged pallet, used for a trial run, on the machine turntable. Adjust M1 & M2 speed-controlled knobs to the desired speed. Packaging operation can be adjusted by the multiple parameters to achieve the user's packaging requirement. Once the user is familiar with the various parameters and adjustments, the user is ready to operate the machine.

## 5.Maintenance & Troubleshooting



### CAUTION!

All machine maintenance work must be performed with the power supply disconnected.

1. Keep the machine clean. Use a dry cloth and cleaning agent to clean the machine. Do not use solvent water to clean the machine to prevent rusting.
2. Regularly perform maintenance on the machine every 3-6 months; Frequency varies with the machine usage. Check for internal dust build up. Check the tightness of the chain and lubricate the chain in routine maintenance inspections.



### WARNING!

Make sure that only qualified personnel perform inspection, troubleshooting and part replacement.



### CAUTION!

Disconnect all power, including external control power that may be present before serving the frequency drive controllers.

| OPERATING ISSUES               | CAUSES                                  | RECOMMENDATIONS                                                                                                                                                             |
|--------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The machine is not powering on | Main power is turned off                | Check the power going into the machine. Verify that switch is turned on.                                                                                                    |
|                                | Wrong parameter setting                 | Reset parameter                                                                                                                                                             |
|                                | PLC Failure                             | Replace PLC                                                                                                                                                                 |
|                                | No display on PLC screen                |                                                                                                                                                                             |
|                                | Breaker Failure                         | Replace Breaker                                                                                                                                                             |
| Turntable does not run         | Pallet overweight                       | Reduce the pallet weight                                                                                                                                                    |
|                                | Chain falls off                         | Check the chain transmission mechanism (loosen the chassis screws, remove the turntable cover and check whether the chain and tension are abnormal.                         |
|                                | Loose Chain                             |                                                                                                                                                                             |
|                                | Inverter failure or damage              | The output protection of the inverter will flash the fault code on the inverter. Look up the corresponding fault code and troubleshoot method. Replace inverter if damaged. |
| Film Carriage malfunction      | Limit switch failure or damage          | Overhaul or replace the limit switch                                                                                                                                        |
|                                | Photocell failure or damage             | Overhaul or replace the photocell                                                                                                                                           |
|                                | Loose chain or interference             | Overhaul the vertical lifting chain system                                                                                                                                  |
|                                | PLC Failure                             | Replace the PLC                                                                                                                                                             |
|                                | Carriage Up/Down button is unresponsive |                                                                                                                                                                             |
|                                | Inverter failure or damage              | Troubleshoot and replace inverter if damaged                                                                                                                                |
|                                | Motor Failure                           | Overhaul the lifting motor                                                                                                                                                  |
|                                | The bottom safety plate is stuck        | Overhaul if the safety plate is stuck or the safety switch is damaged                                                                                                       |

## 6.Components & Parts

### Turntable

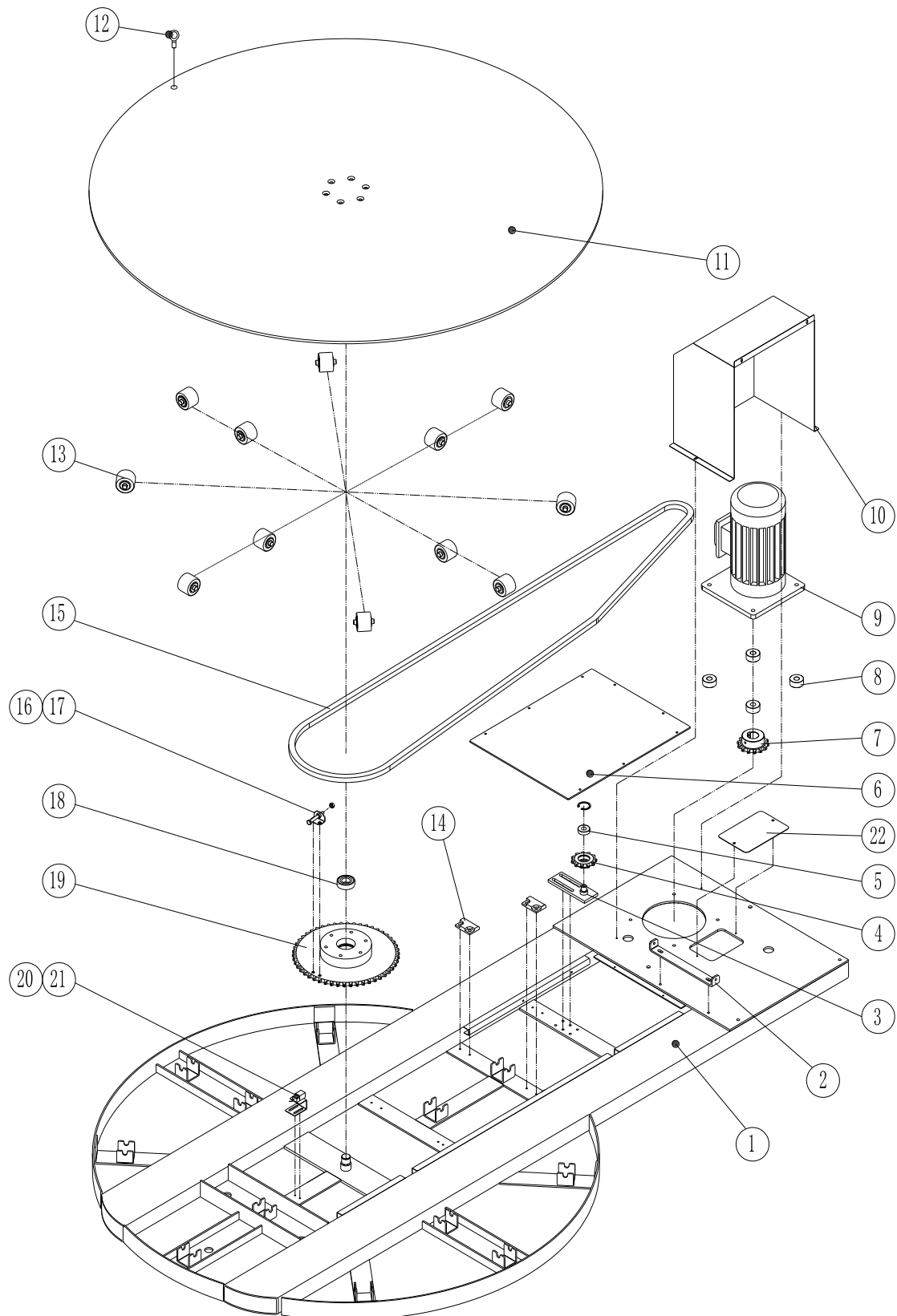


Figure 16

| Turntable |                  |                                    |     |
|-----------|------------------|------------------------------------|-----|
| No        | Part No          | Description                        | QTY |
| 1         | XT4505-0100-V1   | Turntable Base                     | 1   |
| 2         | XT45N-0101-1     | Hinge fixing base                  | 1   |
| 3         | 10000000698-V1   | Tension pulley bracket             | 1   |
| 4         | XT4505-0129-V1   | Tension pulley:12B-Z11             | 1   |
| 5         | XT8020-0614      | Plastic Spacer15*5                 | 1   |
| 6         | XT4505-0126-V2   | Protection Cover                   | 1   |
| 7         | 10000000486G     | Motor chain pulley : 12B, 14 teeth | 1   |
| 8         | XT8020-0506      | Plain roller                       | 1   |
| 9         | CV-32-750-30S-UL | Vertical Gear motor 0.75KW         | 1   |
| 10        | XT4505-0102-V1   | Motor cover                        | 1   |
| 11        | 10000000510-V2   | Disc                               | 1   |
| 12        | GB/T825-1988     | Ring Screw M10                     | 1   |
| 13        | 10010000617      | Turntable roller                   | 12  |
| 14        | 10000000548      | Chain noise reducer                | 3   |
| 15        | GB/T1243 -1997   | Chain 12B-190 keys with joint      | 1   |
| 16        | 10000000688      | Contacting plate holder            | 1   |
| 17        | GB/T5783-2000    | Hex bolt M8*60                     | 1   |
| 18        | GB/T276-1994     | Bearing 6205-2Z                    | 1   |
| 19        | 10000000693      | Center turntable pulley:12B-Z50    | 1   |
| 20        | PL-05N NPN Type  | Approximate Switch                 | 1   |
| 21        | XT45N-0110       | Approximate Switch Holder          | 1   |
| 22        | XT4505-0138      | Motor bottom cover                 | 1   |

## Film Carriage

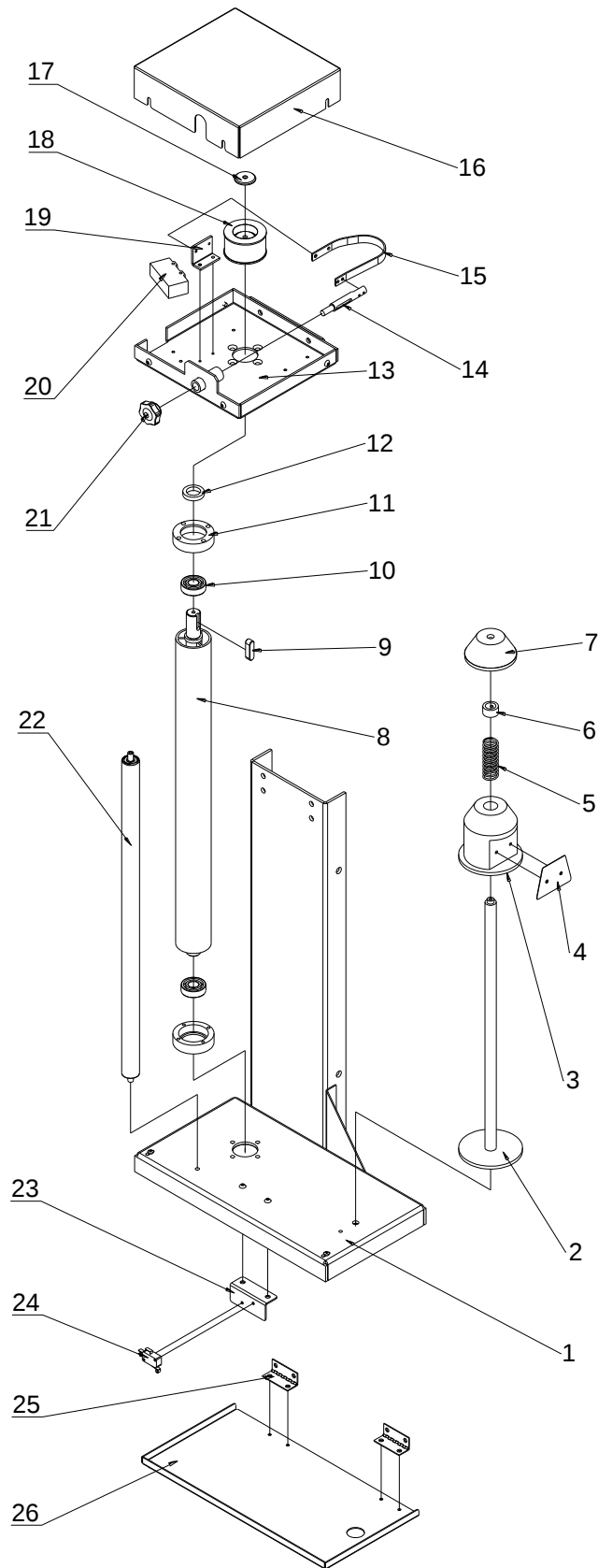


Figure 18

| Film Carriage |                |                             |     |
|---------------|----------------|-----------------------------|-----|
| No            | Part No        | Description                 | QTY |
| 1             | XT45Z-02-V2    | Bottom fixed plate assembly | 1   |
| 2             | XT45M-19       | Film roll: Welding assembly | 1   |
| 3             | 10000000033    | Film roll: bottom seat      | 1   |
| 4             | 10000000035-V1 | Spring Plate                | 1   |
| 5             | 10000000030    | Spring                      | 1   |
| 6             | 20545000404-V1 | Lock Ring                   | 1   |
| 7             | 10000000034    | Film roll: Top seat         | 1   |
| 8             | XT45Z-06-V1    | Rubber roller unit          | 1   |
| 9             | GB/T1096       | Plain key 6*6*25            | 1   |
| 10            | GB/T276        | Deep groove bearing         | 2   |
| 11            | XT45M-12-V3    | Rubber roller bearing seat  | 2   |
| 12            | XT4508A-0205   | Lock Sleeve                 | 1   |
| 13            | XT45Z-01-V2    | Film carriage top plate     | 1   |
| 14            | XT45Z-11-V1    | Brake shaft                 | 1   |
| 15            | XT45Z-11-1     | Rubber belt L218*W12*T2mm   | 1   |
| 16            | XT45Z-03-V1    | Top film carriage cover     | 1   |
| 17            | XT45Z-09       | Shaft lock ring             | 1   |
| 18            | 10000000046    | Tension friction wheel      | 1   |
| 19            | XT45Z-10-V1    | Belt Holder                 | 1   |
| 20            | FR-2MX         | Photocell                   | 1   |
| 21            | M8*20          | Star knob                   | 1   |
| 22            | XT45M-14       | Guide roller                | 2   |
| 23            | XT45Z-16       | Switch install plate        | 1   |
| 24            | KW3-0Z-2       | Micro switch with Wheel     | 1   |
| 25            | QB/T3876       | Hinge:50*38                 | 2   |
| 26            | XT45Z-15-V3    | Safety plate                | 1   |

## Tower and Lift

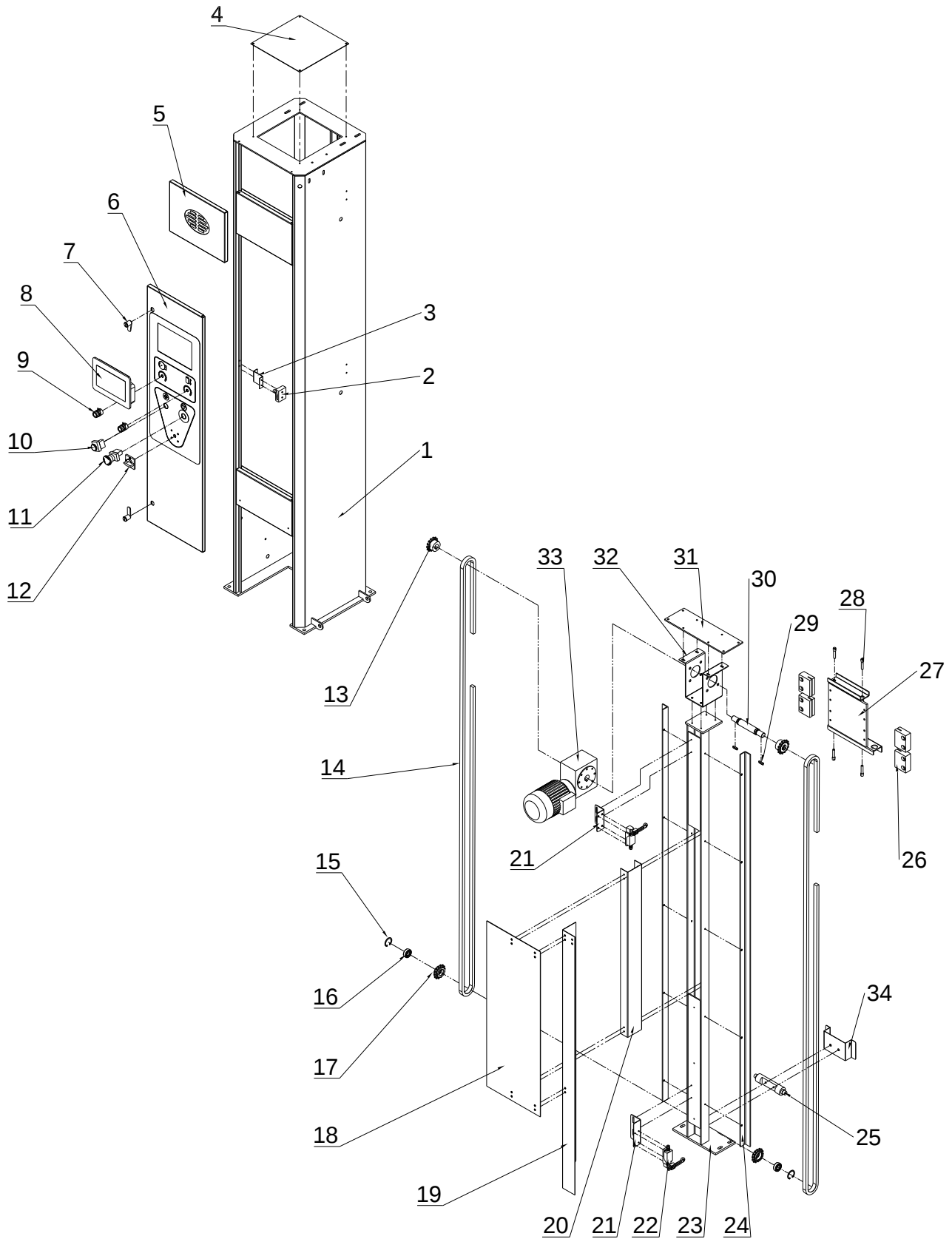


Figure 19

| Tower and lift Assembly |                            |                                        |     |
|-------------------------|----------------------------|----------------------------------------|-----|
| No                      | Part No                    | Description                            | QTY |
| 1                       | XT4505-0201-V2             | Tower body                             | 1   |
| 2                       | Z15G 1703 15A              | Door safety switch                     | 1   |
| 3                       | XT4505-0206                | Z type holder                          | 1   |
| 4                       | XT4505-0204                | Tower body top cover                   | 1   |
| 5                       | XT4505-0203                | Tower body top protection plate        | 1   |
| 6                       | XT4515-02-002              | Door                                   | 1   |
| 7                       |                            | Latch                                  | 2   |
| 8                       | DOP-107BV                  | Delta Touch Screen                     | 1   |
| 9                       | NRV228P-B472-4.7K + MF-A03 | Potentiometer + Knob                   | 3   |
| 10                      | HBDS1-AWY-11               | Start Button                           | 1   |
| 11                      | K22-81R                    | Emergency stop switch                  | 1   |
| 12                      | ULW26GS-20/04-1            | Power switch                           | 1   |
| 13                      | 10000000549                | Lifting motor chain wheel:08B 14 teeth | 2   |
| 14                      | 08B P12.7                  | Chain 08B(P12.7),314 joints            | 2   |
| 15                      | GB/T893.1 D35              | Locking ring 35                        | 2   |
| 16                      | GB/T276                    | Bearing:6202-ZZ                        | 2   |
| 17                      | XT4505S-0113               | Chain wheel:08B 14 teeth               | 2   |
| 18                      | XT4505S-0110-V2            | Electrical housing                     | 1   |
| 19                      | XT4505S-0115-V2            | L Channel bracket                      | 1   |
| 20                      | XT4505S-0105               | Electrical component storage           | 1   |
| 21                      | XT4505-0119-CN82           | Bottom limit switch seat               | 2   |
| 22                      | XCM2145L1                  | Limit switch                           | 2   |
| 23                      | XT4505S-010702-V4          | Inner tower assembly                   | 1   |
| 24                      | XT4505S-0104               | Guide rail                             | 2   |
| 25                      | XT4505S-0103G              | Sliding block                          | 4   |
| 26                      | XT4505S-0102-V1            | Driven shaft                           | 1   |
| 27                      | XT4505S-0109-V1            | Connection board assembly              | 1   |
| 28                      | XT4505S-0111               | Screw                                  | 4   |
| 29                      | GB/T1095                   | Key 6*6*25                             | 2   |
| 30                      | XT4505S-0101               | Driving shaft                          | 1   |
| 31                      | XT4505S-0108               | Top lifting board                      | 1   |
| 32                      | XT4505S-010701             | Motor Seat                             | 1   |
| 33                      | NMRV050-60-T712-4 B14      | Lifting reduction motor                | 1   |
| 34                      | XT4505S-01-20              | Lifting pulley cover                   | 1   |

Electrical Components

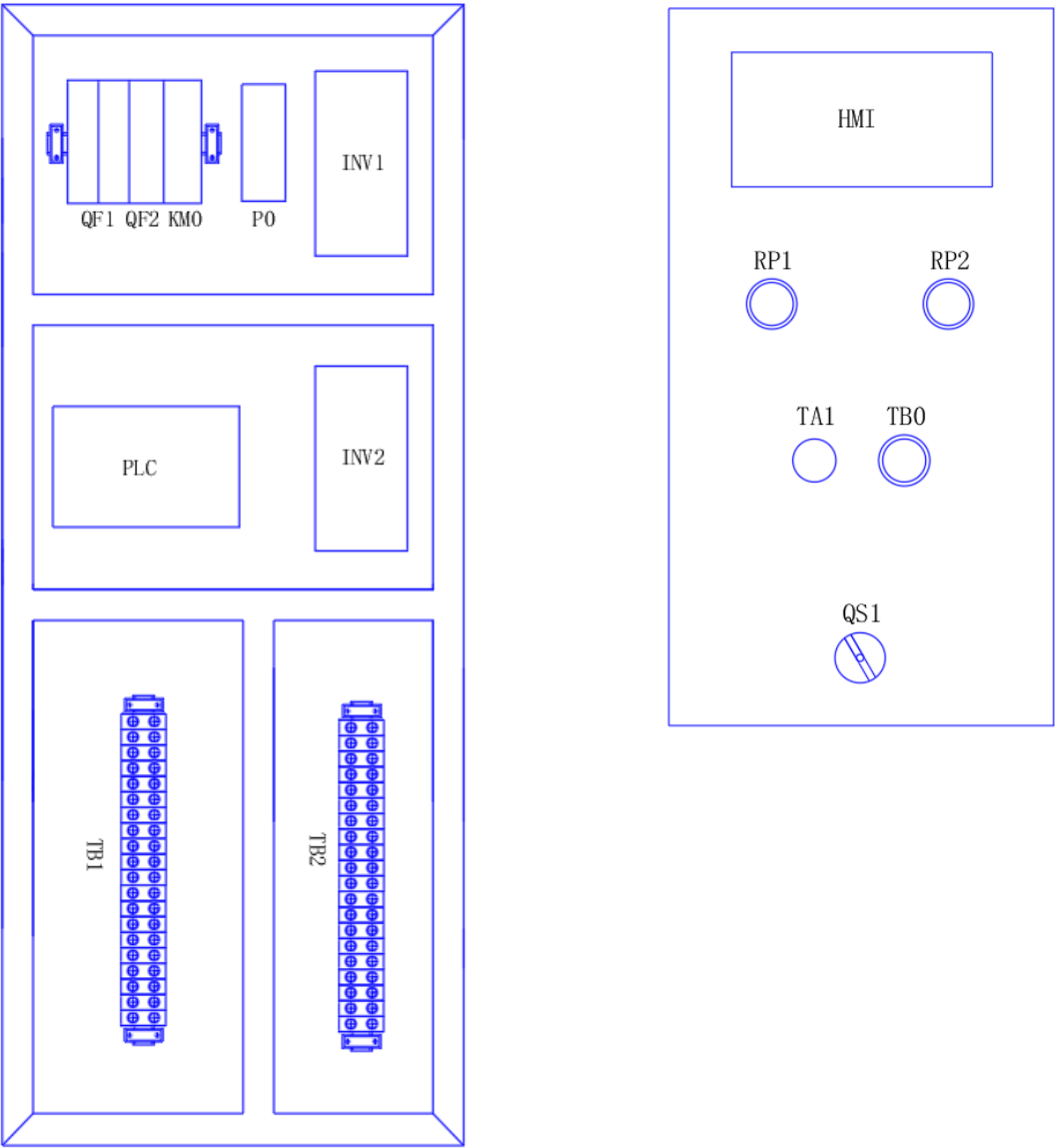


Figure 20

| No      | Part No                | Description           | QTY |
|---------|------------------------|-----------------------|-----|
| QF1     | Circuit Breaker        | NB1-63 2P C16A6KA (R) | 1   |
| QF2     | Circuit Breaker        | NB1-63 1P C2A6KA (R)  | 1   |
| KM0     | Contactor              | LC1D18BD 18A 24VDC    | 1   |
| PO      | Power Switch           | LRS-50-24             | 1   |
| INV1    | Turntable inverter     | GD20-0R7G-S12-UL      | 1   |
| INV2    | Lift inverter          | GD20-0R4G-S12-UL      | 1   |
| PLC     | Delta PLC              | DVP24ES200R           | 1   |
| TB1     | Connector              | TD1520                | 1   |
| TB2     | Connector              | TD1520                | 1   |
| HMI     | Touch screen           | DOP-107BV             | 1   |
| RP1     | Potentiometer          | NRV228P-B472-4.7K     | 1   |
| RP2     | Potentiometer          | NRV228P-B472-4.7K     | 1   |
| TA1     | Start Button           | HBDS1-AWY-11          | 1   |
| TB0     | Emergency button       | K22-81R               | 1   |
| QS1     | Power isolation switch | ULW26GS-20/04-1       | 1   |
| Scale   | Scale                  | PS—FSK-TN-UL-01       | 1   |
| Printer | Printer                | PS—FSK-TN-UL-02       | 1   |

Electrical Diagram

