



CE

Operations Manual

Eagle 2000F Series Stretch Wrapper



**READ ALL INSTRUCTIONS CONTAINED IN THIS
MANUAL PRIOR TO MACHINE INSTALLATION!**

Rev. 1-2003

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1.1 Safety & Warnings

- Before servicing, always power down and unplug the machine from the power source.
- Ensure that the correct voltage is being supplied from the power source.
- Do not touch the turn table while machine is in operation.
- Place all items to be wrapped in the center of the turntable.
- Keep the machine and surrounding area clean, clear and free of debris to ensure safe operation.

Warning Labels



DO NOT MODIFY OR REMOVE WARNING LABELS



Turntable Edge (x2)



Use Caution When Stepping or Walking
(Turntable may move)

Platform

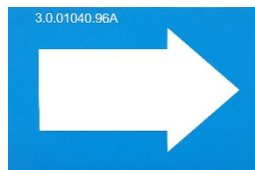


Table Rotation Direction

Platform



Do Not Step

1.1 Safety & Warnings



DO NOT MODIFY OR REMOVE WARNING LABELS



Film Carriage

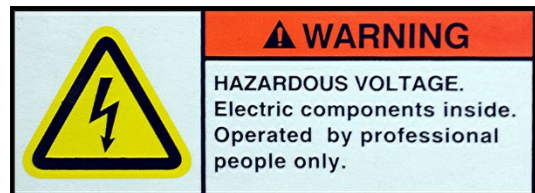


NO OPEN WHEN RUNNING

Do Not Open While Running



Control Panel (Bottom)



Electrical Hazard

Do not service machine while powered up and connected to power source!

1.2 Specifications - Eagle 2000F

Power Supply	110VAC, 60Hz
Air Supply	80 PSI
Turntable Speed	(Standard 0-12 rpm) (Optional 0-20rpm) *
Turntable Motor	1 HP 750W 1420 RPM 220V 1:30 Gearbox
Turntable Diameter	64.9"
Turntable Diagonal	58"
Turntable Height	3.4"
Turntable Gear	1:5
Turntable Chain	12A-1 ISO
Carriage Up/Down	1/3 HP 1390 RPM 220V 1:60 Gearbox
Carriage Up/Down Chain	08B-1 ISO
Pre-Stretch Motor	1/3 HP 1390 RPM 220V 1:20 Gearbox
Pre-Stretch Gear Ratio	1:12
Pre-Stretch Chain	06B-1 ISO
Film Stretch	250% pre-stretch with adjustable load force
Film Lift	Photo-eye controlled to match pkg height **
Film Width	20" (standard) or 30" (option)
Adjustable Internal Limit Switches	8" Top & Bottom Rails
Max Film Height	87"
Mast Height	94"
Max Turntable Weight Capacity	5000 lbs
Max Package Height (2" Overlap)	87"
Machine Dimensions	96.5" X 59" X 99"
Shipping Weight	1295 lbs
Attachment	Ramp or Custom Heavy Duty ***
Noise	≤75 DB
Environment	Humidity ≤98% Temperature 32-104°F

¹ Note: Black product requires custom photo-eye installation.

² Factory ramp is for use with hand pallet jacks only. Maximum combined weight of jack and product must not exceed 1,300lbs. Custom heavy-duty ramps are available for use with loads exceeding 1,300lbs.

³ Turntable maximum RPM can be increased to 20 RPM upon request.

1.3 Outline and Application Field

This machine features a PLC controller. The electric subassembly uses world famous products such as OMRON, LG and TE components. This provides a reasonable, high reliability and convenient use for the machine. It can advance production efficiency and prevent goods from being damaged during transportation. This machine has a wide range of applications and is used in the following industries: chemical, fiber, tobacco, pharmaceutical, publishing, refrigeration, etc.

1.4 Position of Operation

When not operating the machine via remote control, the operator may stand in front of the operating screen, away from the turntable and carriage. The operator must ensure that no other individual or devices such as the forklift are at risk during operation. (See Fig. 1-1)



Fig. 1-1

1.5 Safety Precautions Prior to Operating Machine

- This machine uses 110V, 60Hz, single phase power.
- Do not plug into an extension cord.
- Do not step on the machine when it is running
- Do not install this machine on soft ground.
- Install on a level surface.
- Do not put the object to be wrapped on the edge of the turntable.
- Turn off the power after done using the machine.
- In an emergency, press the emergency stop button. This will cease movement of the machine.
- Clean the machine once a day.
- Only a Qualified Technician should change or test the wiring and/or electrical components.
- **DO NOT** push, drag, or slide machine! Doing so will cause severe damage!

2.1 Machine Structure & Components Illustration

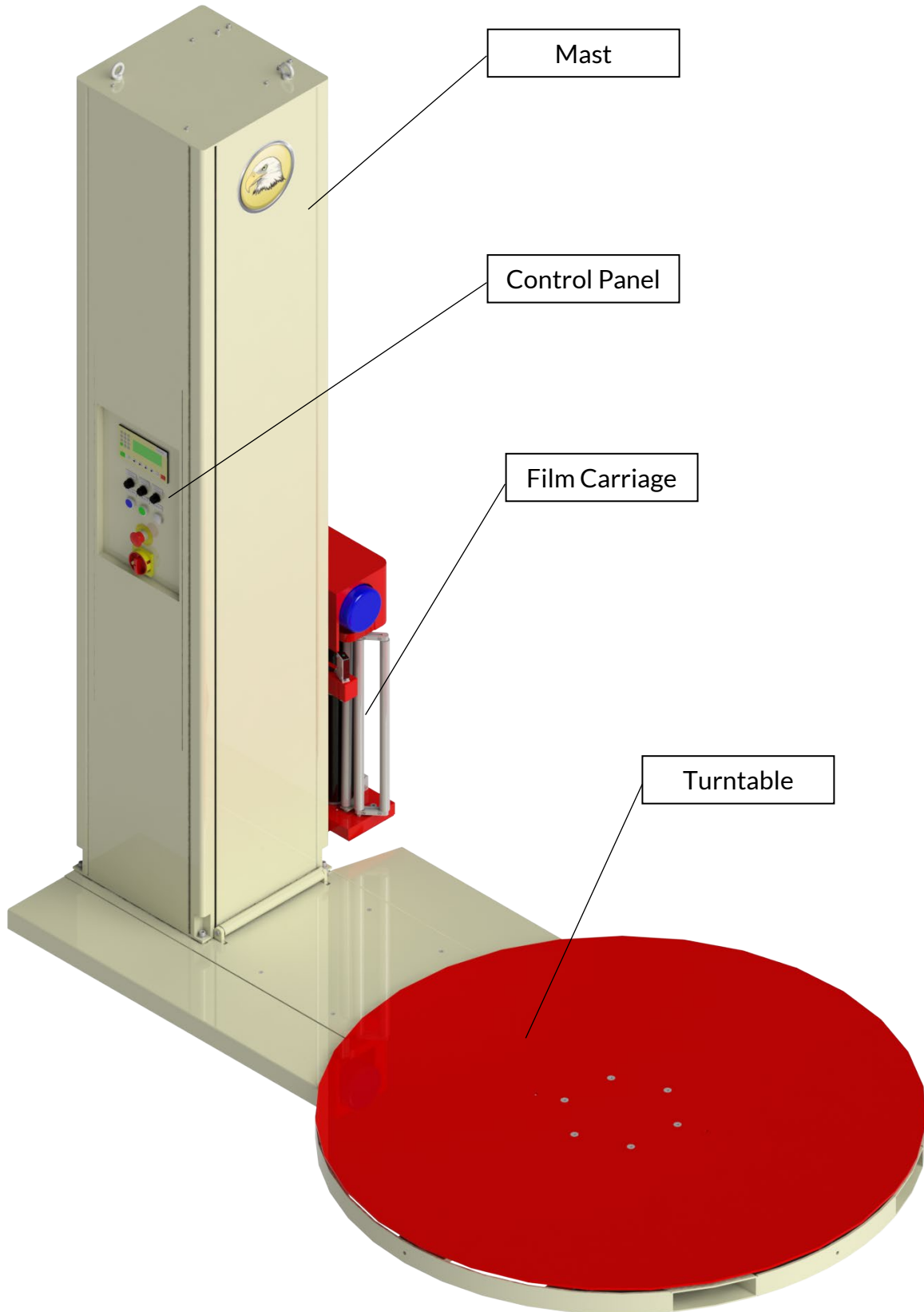


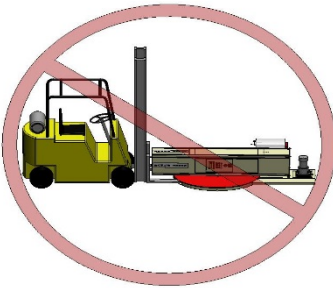
Fig. 2-1

2.2 Transportation

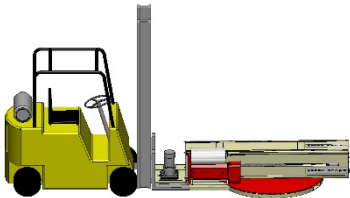
You must have at least 4ft fork tubes or tube extensions fully inserted into the machine and a forklift rated for 3,000lbs to transport the machine safely. Do not raise the load more than 6" off of the ground. (See Fig. 2-2)



ALWAYS USE OSHA HANDLING PROCEDURES FOR HANDLING THE STRETCH WRAPPER AND REMEMBER TO NEVER PUSH, DRAG, OR SLIDE THE MACHINE!

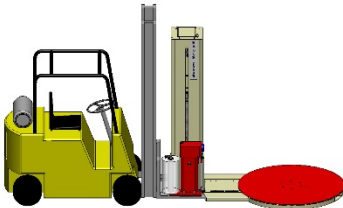


Do not transport machine from turntable when mast is lowered!

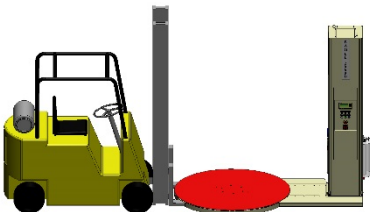


When transporting the machine in this configuration;

1. Inspection cover must be removed before raising or lowering the mast.
2. Carriage must be raised 8 inches



Carriage must be raised 6~8 inches before attempting to lift machine from this end.



It is acceptable to transport machine by turntable when mast has been raised.

2.3 Installation

Step 1 - Place the machine in the desired location using a tow motor or crane capable of handling a load of 3,000lbs. (See Fig. 2-3)

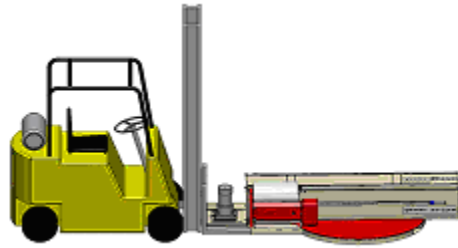


Fig. 2-3

Step 2 - Remove the lower rear inspection panel on the mast prior to raising the mast. The panel is located on the end of the machine next to the turntable motor. The panel has a warning label affixed to it. (See Fig. 2-4a & Fig. 2-4b)

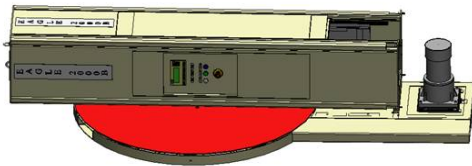


Fig. 2-4a

WARNING
MUST FOLLOW THE
INSTALLATION
INSTRUCTIONS ON PGS 4-7
IN THE MACHINE MANUAL.
FAILURE TO DO SO COULD
CAUSE DAMAGE AND VOID
WARRANTY. THIS PANEL
MUST BE REMOVED PRIOR
TO STANDING UP THE
MACHINE.

WARNING
Fig. 2-4b

Step 3 - Lift the mast using hoisting tools. A tow motor or hoist rated for at least 3,000lbs is required. While lifting the mast, use caution to ensure that wires and connectors are not pinched. (See Fig. 2-5a)

Once the machine is fully upright, one individual can stabilize the mast while a second individual fastens the four M10 bolts to secure the mast to the base. The M10 bolts are to be tightened to 30ft/lbs of torque. (See Fig. 2-5b)

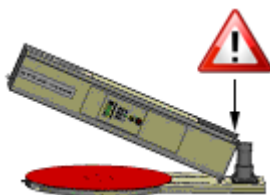


Fig. 2-5a

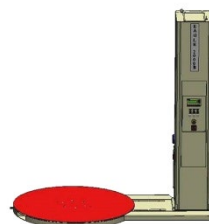


Fig. 2-5b

2.3 Installation

Step 4 - If installing a ramp, place the ramp by locating the ramp shoulder bolt and placing it into the slot in the ramp. It is highly recommended to anchor the ramp to the floor. (See Fig. 2-6)

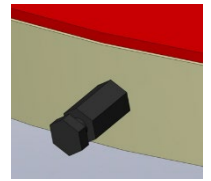


Fig. 2-6

Step 5 - Affix the carriage onto the corresponding position on the mast and fasten with four M8 bolts. (See Fig. 2-7) Insert the connector plugs on the front of the carriage into the receptacles. (See Fig. 2-8) Do not force the connectors together.

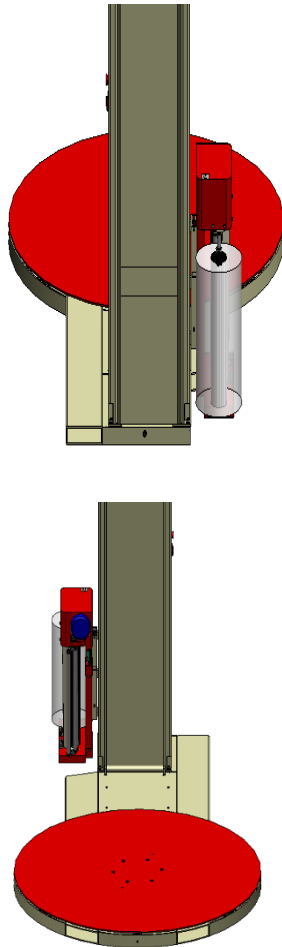


Fig. 2-7



Fig. 2-8*

2.3 Installation

Step 6 - Insert the connector plug inside the bottom of the mast into the corresponding receptacles. (See Fig 2-9a, 2-9b, 2-9c)



Fig. 2-9a



Fig. 2-9b



Fig. 2-9c

Note: These connectors are for carriage motor power (pre-stretch), photo-electric eye, home limit switch, and E-Stop switch located on the bottom of the carriage.

Step 7 - Fasten the lower rear panel into the corresponding position on the post using the pin. (See Fig. 2-10)

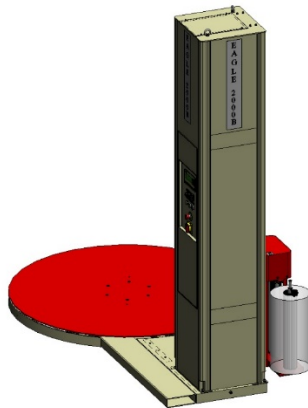


Fig. 2-10

Step 8 - Verify that all screws are tight and then turn on the power. Check to see if the power indicator is on and that text is displayed on the LCD screen.

Step 9 - Connect air supply and verify pressure levels.

2.4 Operational Environment

- Machine should be far from smoke, preferably in a dry, well-ventilated area.
- Normal environment temperature should be within 32°F and 104°F.
- No special requirements for electromagnetic radiation.
- Machine should not be placed under direct lighting as it may cause photoelectric eye to malfunction.
- **DO NOT** push, drag, or slide machine! Doing so will cause severe damage!

Note: If product to be wrapped is a dark color (black, dark blue, etc...), the standard photoelectric eye may not work properly. A photo-eye upgrade option is available for sensing dark objects.

3.1 Operational Steps & Film Loading



BEFORE LOADING FILM, PRESS THE EMERGENCY STOP BUTTON AND TURN THE POWER SWITCH TO THE OFF POSITION

Loading stretch film into carriage

Step 1 - Loosen fastening screw "A" and take off roll holder "B". (See Fig. 3-1)

Step 2 - Center the film core over the film shaft and lower onto the lower orientation plate "C" of the film shelf. (See Fig. 3-1)

Step 3 - Mount roll holder "B" and re-tighten fastening screw "A". (See Fig. 3-1)

Step 4 - Push down handle "E" to open carriage door. Then press the film through in the direction of the arrow and close the door (do not slam). Pass the film behind and around the first roller and then between the first and second roller.
(See Fig. 3-3 and Fig. 3-4)

Step 5 - Draw enough stretch film to reach the clamp located on the turntable and insert the end of the stretch material into the clamp.

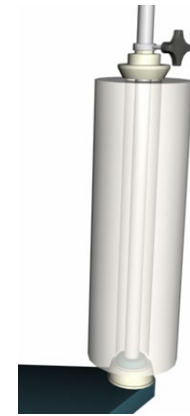


Fig. 3-1

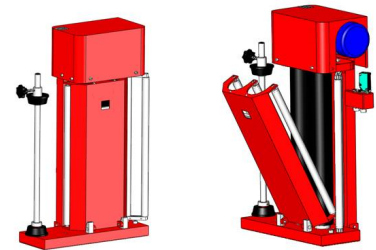


Fig. 3-2

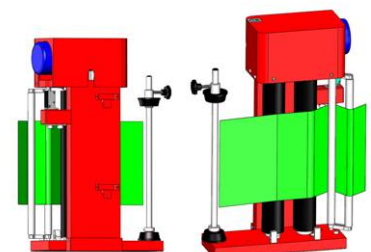


Fig. 3-3

Note: Do not slam or force the carriage door closed. Doing so may cause damage to hinges and carriage door locking mechanism. Do not use sharp objects on or near rollers as they can be easily damaged.

3.2 Basic Machine Operation



1. Screen Controller	6. Load Force
2. Table Speed	7. Reset Button
3. Carriage Speed	8 Emergency Stop Button
4. Power Indicator	9. Power Switch
5. Start Button	

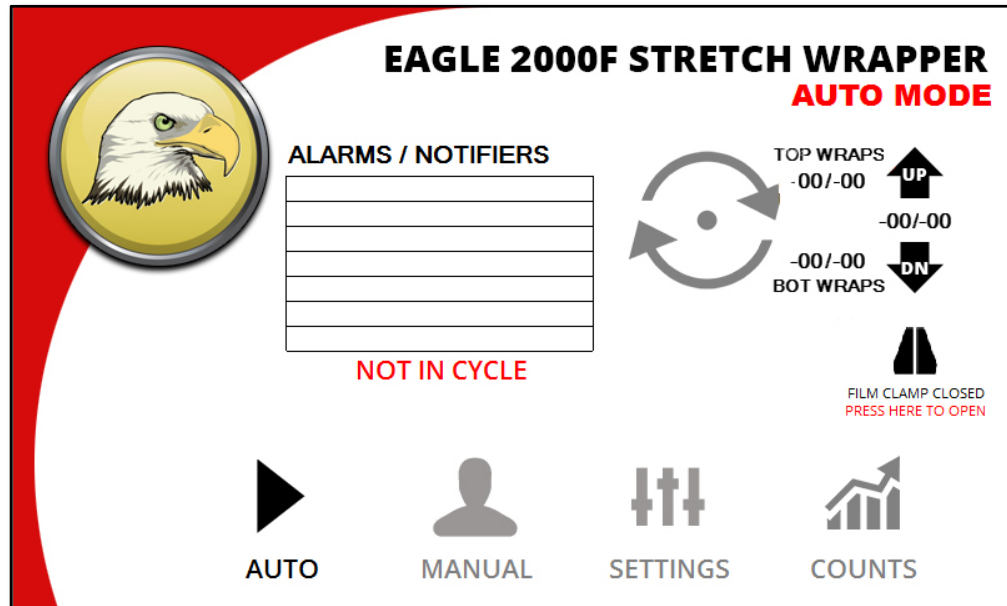
The turntable speed and load force knobs can be adjusted to achieve desired film tension.

The speed and load force work in conjunction. If the table speed is increased, the load force will need to be decreased to maintain the same film tension. If the table speed is decreased, the load force will need to be increased to maintain the same film tension.



The Eagle 2000F can be operated remotely by use of a hand-held controller. This allows the machine operator to run and stop the stretch wrapper wirelessly.

3.3 LCD Screen Operation



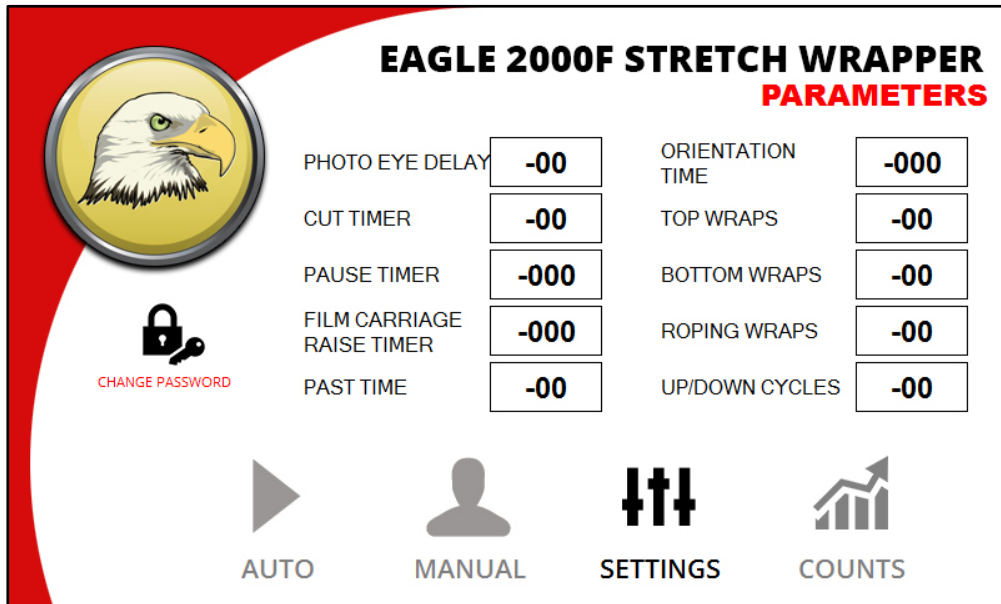
The LCD screen displays information used to control the machine and to make changes to operational parameters. Active keys are shown with a circle or square around them. Pressing the corresponding key will execute the function.

To change screens, press the icon displayed at the bottom of the screen.

Numeric values can be entered by pressing on the value. An on-screen keyboard will be displayed for data entry.

Once the desired value has been entered, press ENTER to save any changes.

3.4 Navigating LCD Screens

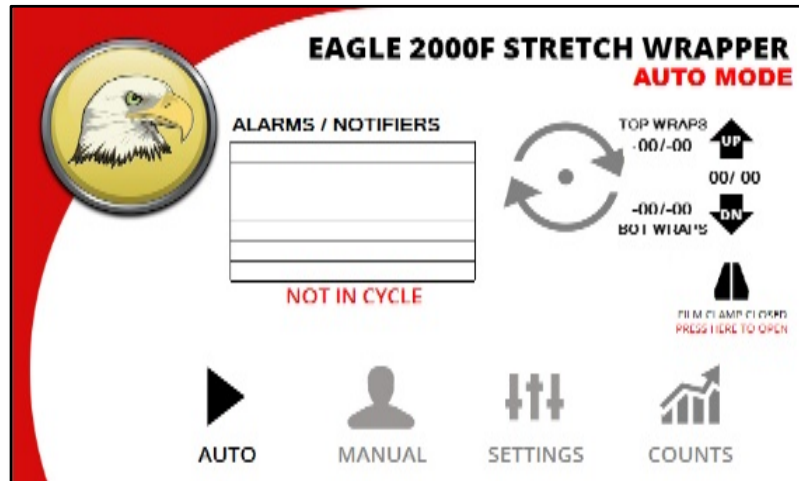


Parameter Settings / page 1

From this screen, you can set;

- Photo Eye Delay = How far the film travels over the top of the skid
- Cut Timer (Hot Wire) = How long the wire stays hot for cutting the film
- Pause Timer = How quick the machine starts after the “Start” button is pressed
- Film Carriage Raise Timer = How far the carriage goes up before the cycle starts
- Past Time = How long the heat stamp presses the film together at end of cycle
- Orientation Time = How the machine slows down and stops in correct home position
- Top Wraps = How many cycles at the top of the skid
- Bottom Wraps = How many cycles at the bottom of the skid
- Roping Wraps = How many cycles the roping bar grabs the film before the wire cuts the film
- Up/Down Cycles = How many up and down cycles the machine will do in one operation

3.4 Navigating LCD Screens

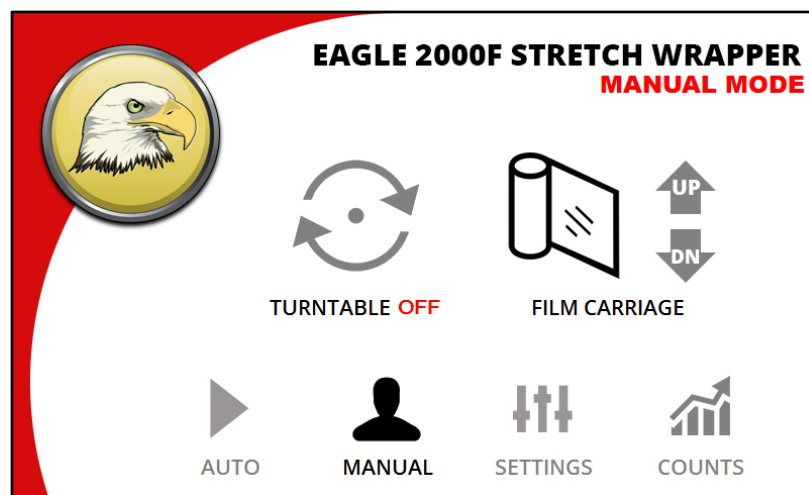


Job Mode / Auto

To begin, press **Start** button

Note: The film clamp must be closed to start a job. To manually close the film clamp, press either the film clamp button to the front of the machine or the @ button

The machine will wrap around the package once at the bottom and the carriage will begin traveling up to the height of the package. At the top of the package, the machine will perform the top wraps before performing the bottom wraps and finishing the cycle.



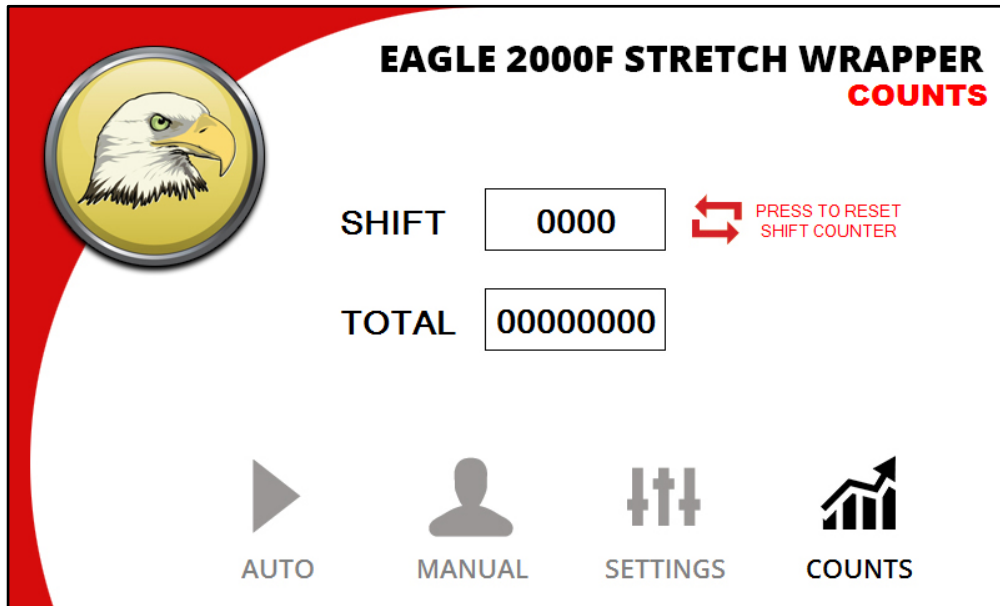
Job Mode / Manual

Turntable - Start/Stop turntable rotation

Film Carriage Up - Start/Stop carriage travel up

Film Carriage Down - Start/Stop carriage travel down

3.4 Navigating LCD Screens



Job Count

This screen displays the current number of cycles and the total number of cycles of the machine.

To reset the current shift count, press "PRESS TO RESET SHIFT COUNTER"

4.1 Weight Scale - Introduction & System Overview



Key	Operation / Function
ON / OFF	<ul style="list-style-type: none"> ▪ Turns Scale On / Off <i>Press and hold for 2+ seconds to operate</i>
Hold	<ul style="list-style-type: none"> ▪ Hold Weight on Scale (Manual Hold) <i>Press 'Hold' with scale loaded.</i> ▪ Hold Peak Weight (Auto Hold) <i>Press 'Hold' prior to loading scale. Can be used for multiple package weighing or unstable loads.</i> ▪ Release Hold Function <i>Press 'Hold' again to return to normal operation.</i> ▪ Return (Settings Mode) <i>Previous</i>
	<ul style="list-style-type: none"> ▪ Settings Mode: Return

4.1 Weight Scale - Introduction & System Overview

Total	<ul style="list-style-type: none"> ▪ Add Weights <i>With package on the scale, press the 'Total' key to enter weight and retain in memory. Press 'Total' after weighing each package to add weight to cumulative total.</i> ▪ View Total <i>Press 'Total' and 'Print' key at the same time. The total weight value will flash continuously.</i> ▪ Exit Total Mode <i>Press and hold the 'Total' key to display "Clr n". Clear Totals - Press 'Zero' key to display "Clr y", then press 'Print' key Keep Totals - Press 'Print' key while "Clr n" displayed</i>
kg/lb	<ul style="list-style-type: none"> ▪ Settings Mode: Previous / Home <i>First press = Previous Second press = Home</i>
Print	<ul style="list-style-type: none"> ▪ Change Display from Kilograms to Pounds
	<ul style="list-style-type: none"> ▪ Settings Mode: Left Arrow
	<ul style="list-style-type: none"> ▪ Print Totals <i>While in View Totals Mode (See - Total: View Total), press and hold 'Print' for 3 seconds to print. (Optional Printer Hardware Required)</i>

4.2 Weight Scale - Error Codes

Error Code	Possible Cause	Solution
uuuuuu	<ul style="list-style-type: none"> ▪ Overloaded condition. ▪ Wrong connection at load cell. ▪ Load cell has quality problem. 	<ul style="list-style-type: none"> ▪ Reduce the weight. ▪ Check load cell connection ▪ Inspect load cell for damage. ▪ Check the input and output.
nnnnnn	<ul style="list-style-type: none"> ▪ Overloaded condition. ▪ Bad connections. ▪ Load cell has quality problem. 	<ul style="list-style-type: none"> ▪ Check scale is resisted or not, foot is kept level or not. ▪ Check load cell connection ▪ Check input and output resistance of load cell.
ERR1	<ul style="list-style-type: none"> ▪ Overweight calibration error. ▪ Incorrect weight input or incorrect weight on weighing platform. 	<ul style="list-style-type: none"> ▪ Input weight correctly during calibration. ▪ Place correct weight on weighing platform.
ERR2	<ul style="list-style-type: none"> ▪ Underweight calibration error. ▪ Incorrect weight input or incorrect weight on weighing platform. 	<ul style="list-style-type: none"> ▪ The calibration weights Minimum is 10% of Max. cap. Recommend 60%-80% of Max. Capacity.
ERR3	<ul style="list-style-type: none"> ▪ During calibration, the input signal is negative. 	<ul style="list-style-type: none"> ▪ Check all connections. Check load cell. If connections and load cell are okay, PCB needs replacing.
ERR4	<ul style="list-style-type: none"> ▪ During calibration, the signal is unstable. 	<ul style="list-style-type: none"> ▪ After the platform is stable, start calibration.
ERR5	<ul style="list-style-type: none"> ▪ Circuitry error 	<ul style="list-style-type: none"> ▪ Replace the PCB.
ERR6	<ul style="list-style-type: none"> ▪ System error 	<ul style="list-style-type: none"> ▪ Call for Tech Support

5.1 Troubleshooting Guide

Error Code	Possible Cause	Solution
Machine will not function	<ul style="list-style-type: none"> ▪ Machine not plugged in. ▪ Outlet where Machine is plugged into has no power or bad outlet. ▪ Power cord has been damaged. ▪ Machine internal circuit breaker tripped. 	<ul style="list-style-type: none"> ▪ Plug machine into 110VAC outlet. ▪ Check to see if outlet has power. ▪ Call service for new cord. ▪ If machine breaker is tripped call tech support.
Machine has power and will not function "Machine Pause"	<ul style="list-style-type: none"> ▪ Input signal 05 is lit on PLC. ▪ E-stop is pushed on main panel. ▪ Carriage base safety switch pushed. ▪ Film Feed Door is not closed properly. ▪ Drive display should display "rdy" for them to be ready. 	<ul style="list-style-type: none"> ▪ Check all E-stop and debris under carriage. ▪ Adjustment may be needed to carriage safety switch reference 4.2 carriage maintenance . ▪ Close door with a firm push Do Not slam or force. ▪ If drive don't display "rdy" call tech support
Machine will not stop at home	<ul style="list-style-type: none"> ▪ Input signal 03 is not lit on PLC. ▪ Bad connection between mass and turn table. ▪ Bad Limit Switch/ Adjustment 	<ul style="list-style-type: none"> ▪ This Input will only illuminate when the Limit Switch is on the cam location. ▪ Tighten or replace connector ensure that their no pinched wires. ▪ Replace Limit Switch or adjust so that rides on cam properly.
Machine will not start job after reset	<ul style="list-style-type: none"> ▪ Input 04 is not lit ▪ Photoelectric Eye is not reading package. 	<ul style="list-style-type: none"> ▪ Photoelectric Eye is not sending a signal to PLC. ▪ Ensure that the both green and amber are illuminated with load in place. ▪ Call tech support
Screen displays Chinese lettering	<ul style="list-style-type: none"> ▪ DB9 connector has come unplugged or is loose. ▪ DB9 connector is bad 	<ul style="list-style-type: none"> ▪ Tighten connector on PLC and Screen / Be sure to check power connections as well ▪ Replace DB9 Connector / call tech support

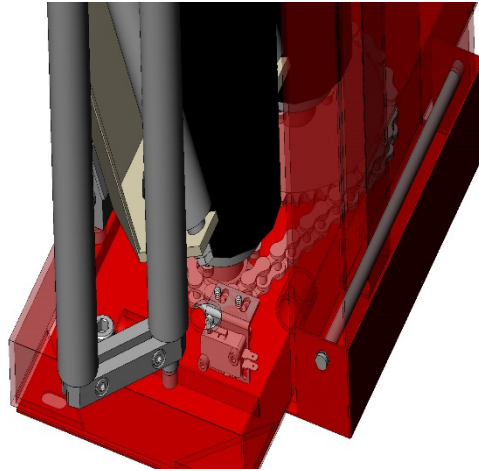
5.1 Troubleshooting Guide

Problem	Possible Causes	Solution
Carriage does not run.	<ul style="list-style-type: none"> ▪ Check to see if the machine is plugged in. ▪ Check carriage speed knob is at minimum position – if so turn carriage speed knob to a higher setting. ▪ Check to see if the chain is broken or disconnected. ▪ Carriage sliding block is jammed – realign slide block. 	<ul style="list-style-type: none"> ▪ Plug machine into adequate power 110 Volt outlet. ▪ Replace chain or reinstall chain / remove any debris. ▪ Loosen slider blocks to realign and lubricate with a dry lube. ▪ Adjust speed potentiometer to correct speed.
Film breaks.	<ul style="list-style-type: none"> ▪ Speed is not set well between load force and turntable speed – adjust the settings. ▪ Check for cuts in film. ▪ Move dancer bar without film to see if motor turned on. ▪ Pre-stretch chain is broken or jammed – reinstall chain or refasten chain wheel. 	<ul style="list-style-type: none"> ▪ Replace roll of film. ▪ Faulty drive / look for rdy on display. May need replaced ▪ Replace chain or reinstall chain and tighten all hardware. ▪ Adjust speed potentiometer to correct speed.
Scale does not work	<ul style="list-style-type: none"> ▪ Is the machine level. ▪ Are all of the leveling feet in the proper place? 	<ul style="list-style-type: none"> ▪ Start by placing the machine on a flat surface and using a level. ▪ Using the leveling feet supplied and screw into load cell
Notes:		

5.2 Carriage Load Safety Switch



**USE EXTREME CAUTION WHEN ADJUSTING
CARRIAGE SWITCH AS IT CAN BE DAMAGED
BY OVER ADJUSTMENT**



Step 1 - Open Carriage Door

Step 2 - Unload any and all stretch film from machine

Step 3 - Loosen jam nut

Step 4 - Loosen bolt in small increments to avoid damage to switch

Step 5 - Close carriage door gently (Do not install stretch film)

Step 6 - If the machine is able to reset, then the carriage door switch is adjusted correctly. If the machine does not reset, then repeat steps 4 & 5

Step 7 - Open carriage door and tighten jam nut

Step 8 - Reinstall stretch film

5.3 Turntable Home Switch



BE SURE TO DISCONNECT POWER AND AIR SUPPLY TO THE MACHINE PRIOR TO ANY MAINTENANCE WORK

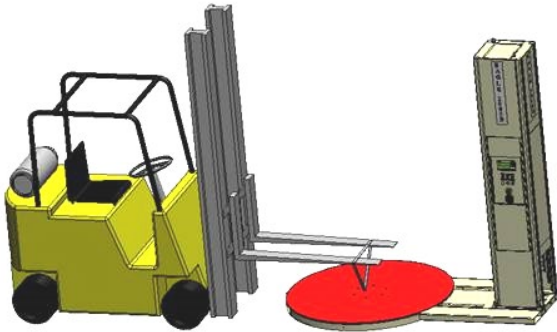


Fig. 4-1



Fig. 4-2

Turntable

- Remove the six M10 flat head cap screws in the turn table.
- Screw in one M10 eyebolt rated for lifting into the tapped hole in the turn plate. Lift the turn table using a hoist and chain rated for a 500lb load. (See Fig. 4-1)
- Lift the turntable just clear of the frame and use the forklift to remove the table. For safety reasons, keep the disk low to the ground.
- Lubricate the chain and gears. Inspect the items and clean out any debris.
- The chain and gears need lubricated every three months. (See Fig. 4-2)

Pre-Stretch Film Carriage



Fig. 4-3

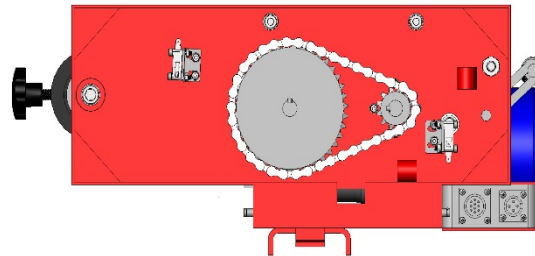


Fig. 4-3

- Lubricate the drive chain of the carriage on a monthly basis. (See Fig. 4-3)

5.3 Turntable Home Switch

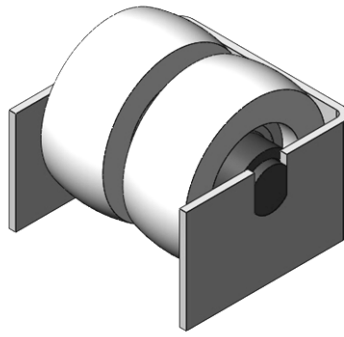


Fig. 4-4

- Remove all 24 idler wheels supporting the turntable rotation if there is excessive bearing play. If the diameter is less than 53mm or there is abnormal noise during operation, replace the bad contact rollers. (See Fig. 4-4)

	Name	Part Number
1	Shrink Ring	FG-03A-20
2	Core Holder Washer	FG-03A-21
3	Core Holder	FG-03A-19
4	Roll Holder	FG-03A-18
5	Film Tension Switch	FG-03-11
6	Idler Wheel	FG-01A-20
7	Chain	12A

5.4 Turntable & Carriage Adjustment

Test Operation

Turntable

- Turn on the power
- From the Main Menu, press;
 - **② Job Mode**
 - **② Manual Mode**
 - **⑤ Turntable** (starts turntable rotation)
 - **⑤ Turntable** (stops turntable rotation)
- Verify there is no play in the turntable and that the fasteners are tight.
- The chain tension controls the amount of play in the turntable. The chain should have no more than ± 0.25 " of play.
 - If greater than ± 0.25 " of play, tighten the chain using the chain adjustment screw located at the back of the frame.

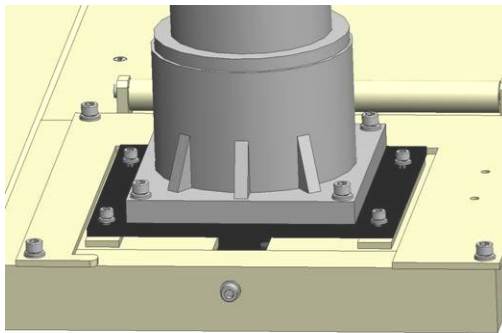


Fig. 5-1

Table Chain Adjustment

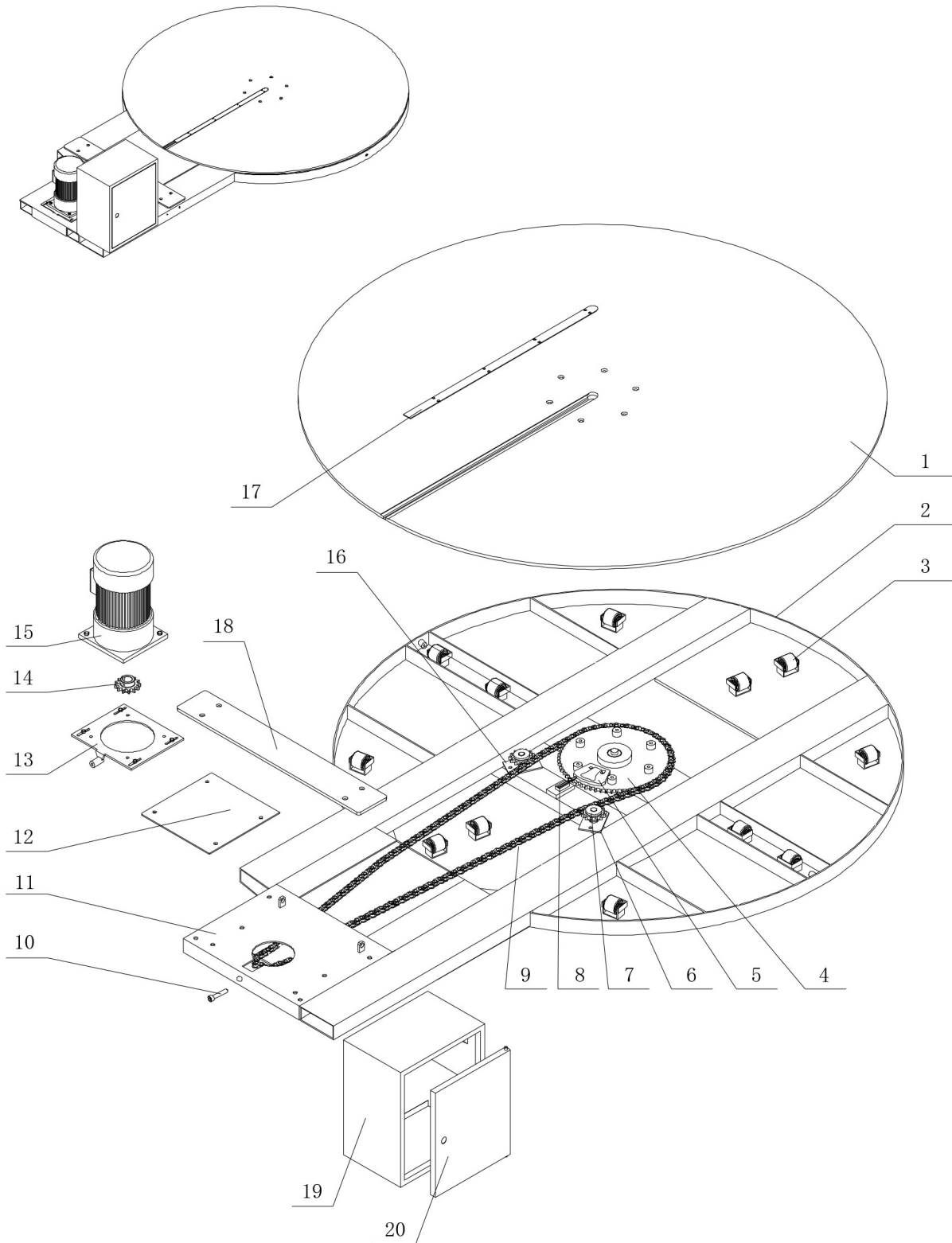
- Loosen the four holding screws of the turntable motor using a 6mm Allen Wrench.
- Turn the chain tension screw using an 8mm Allen Wrench.
 - Clockwise adjustment will tighten the chain and counter-clockwise will loosen the chain.
- After adjusting to an appropriate position, tighten the turntable motor holding screws.

Carriage Chain Adjustment

- Press **⑨ Up** to raise the carriage
- Press **③ Down** to lower the carriage
- Look and listen for smooth and consistent operation. If the action is not smooth, check the carriage chain for obstructions, wear, or damage.

6.1 Illustration

Base



Notes

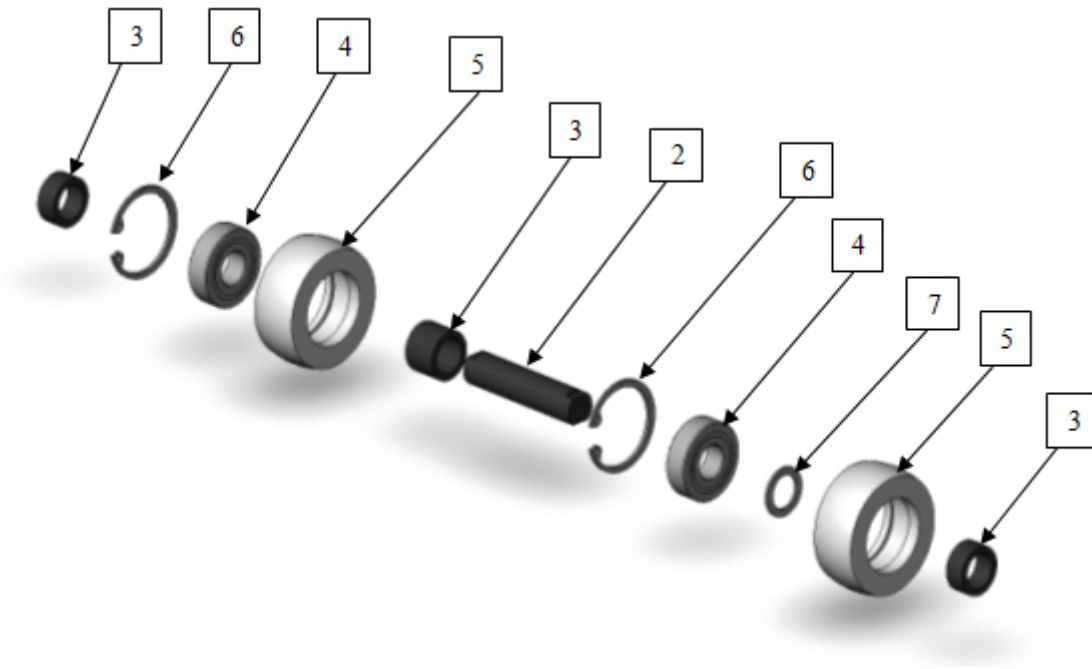
6.1 Illustration

Base (continued)

	Name	Part Number	Qty
1	Turntable	FG-023F	1
2	Base	FG-7000	1
3	Roller Assembly	FG-013A	12
4	Large Sprocket	FG-008	1
5	Travel Switch Touch Block	FG-009	1
6	Chain Tensioner	FG-012	1
7	Tensioner Sprocket	FG-021	2
8	Travel Switch (turn counter)	TZ-918	1
9	Chain	12A	1
10	Adjustment Screw (main motor)	M10x50	1
11	Cover Plate 1	FG-7002	1
12	Cover Plate 2	FG-7003	1
13	Main Motor Base	FG-005	1
14	Small Sprocket	FG-022	1
15	Motor	CV750-30S	1
16	Tensioner Base	FG-011	1
17	Turntable Slot Cover	FG-023F-A	1
18	Bracket	FG-620F	1
19	Enclosure	FG-3220	1
20	Enclosure Door	FG-3221	1

6.2 Illustration

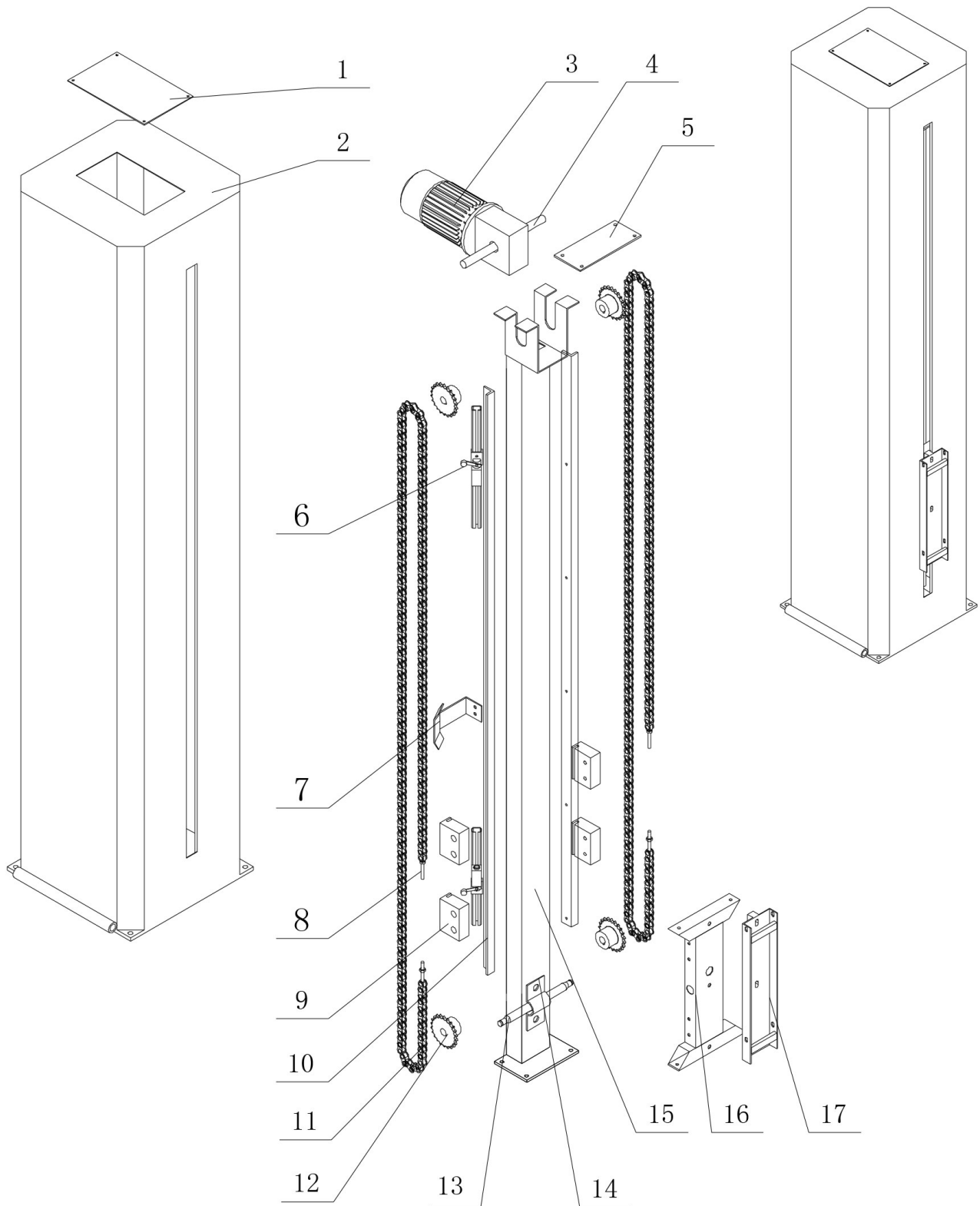
Idler Wheel



	Name	Part Number	Qty
1	Idler Wheel Bracket	n/a	12
2	Idler Wheel Axle	FG-01A-24	12
3	Idler Outer Bushing	FG-01A-23	24
4	Idler Bearing	60202	24
5	Idler Wheel	FG-01A-21	24
6	Idler Wheel Snap Ring	98455A137	24
7	Washer	98454A136	12

6.3 Illustration

Mast



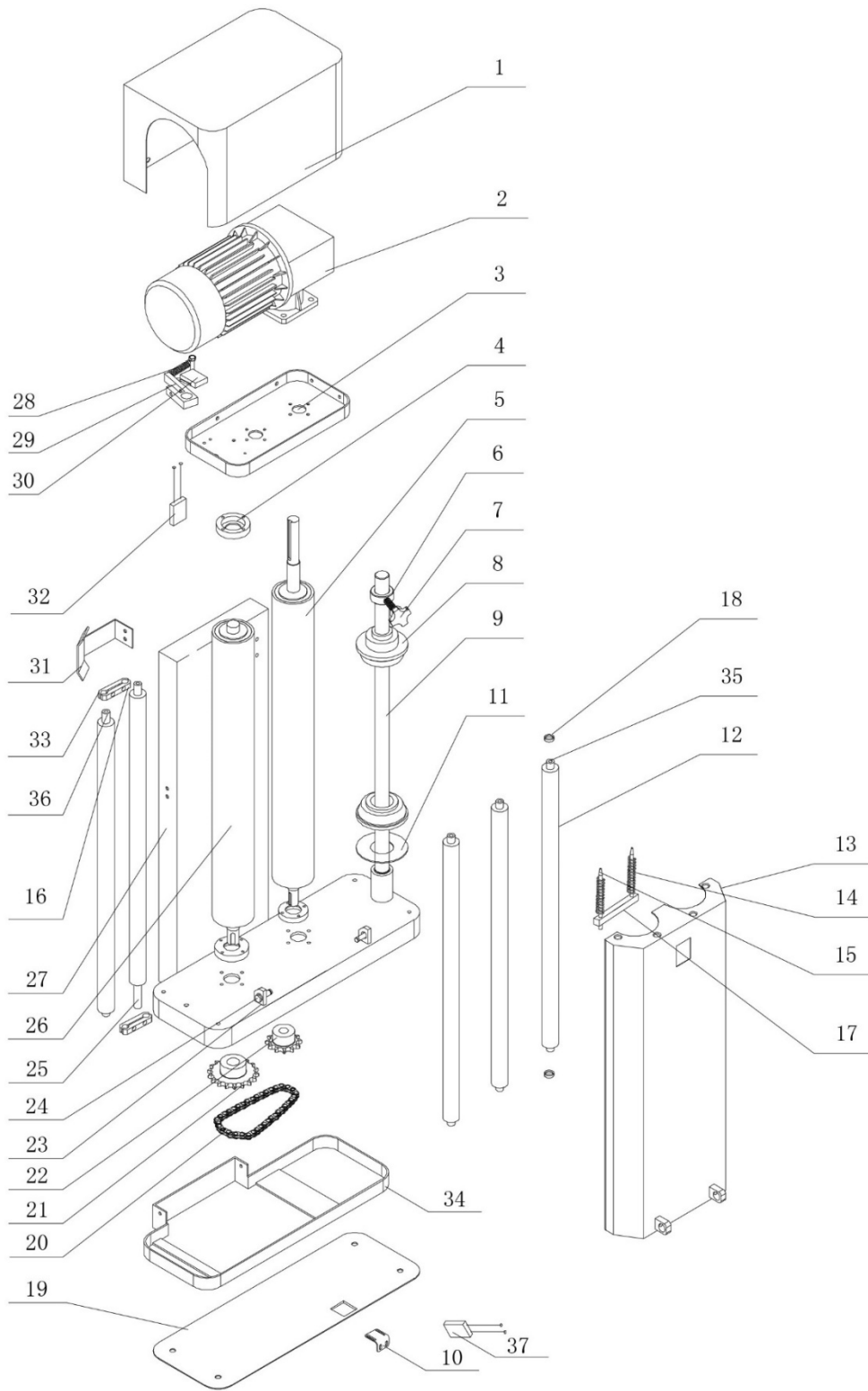
6.3 Illustration

Mast (continued)

	Name	Part Number	Qty
1	Mast Cover	FG-001-21	1
2	Mast	FG-002A	1
3	Motor	MVRV040/60- YS6334/B14	1
4	Motor Shaft	FG-058	1
5	Bracket	FG-063	1
6	Travel Switch	XCKP2145	2
7	Travel Switch Block	FG-08-21	1
8	Chain Adjustment Screw	FG-065	4
9	Slip Block	FG-069	4
10	Slip Track	FG-057	1
11	Chain	08B	2
12	Motorized Sprocket	FG-061	2
13	Shaft	FG-059	1
14	Shaft Bracket	FG-064	1
15	Vertical Guide	FG-055	1
16	Lifting Frame	FG-066	1
17	Lifting Frame Bracket	FG-075A	1

6.4 Illustration

Carriage



6.4 Illustration

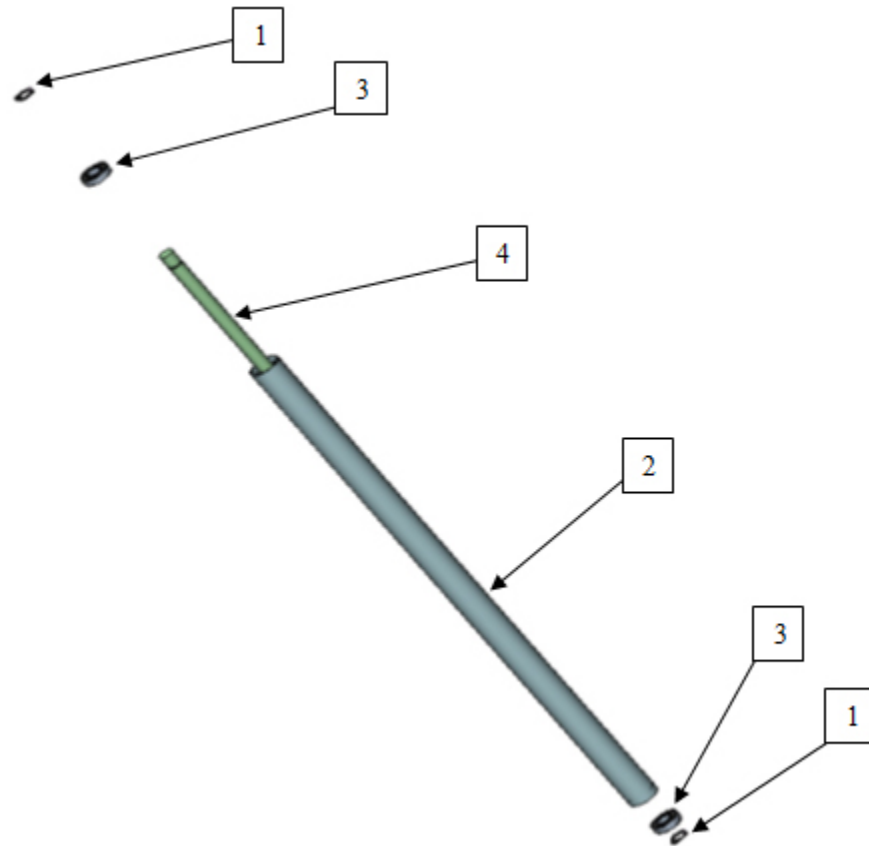
Carriage - Continued from previous page.

	Name	Part Number	Qty
1	Motor Cover	FG-123	1
2	Pre-Stretch Motor	NMRV040/20-YS6334-B14	1
3	Upper Cover	FG-111C	1
4	Bearing Base	FG-132	3
5	Pre-Stretch Roller	FG-114	1
6	Tightening Ring	FG-038A	1
7	Tightening Screw	M10	1
8	Film-Positioning Plate	FG-135A	2
9	Film Shaft	FG-134	1
10	Micro Switch Frame	1060.180.1.PL	1
11	Positioning Ring	FG-2526	1
12	Transition Roller	FG-115	5
13	Transition Roller Seat	FG-112	1
14	Compression Spring	FG-131	2
15	Positioning Pin	FG-126A	2
16	Right Connecting Block	FG-119	2
17	Rail	FG-124	1
18	Bearing	6901	10
19	Lower Cover Plate	FG-122	1
20	Chain	06B	1
21	Motorized Sprocket	FG-114	1
22	Motorized Sprocket	FG-143	1
23	Lower Hinge	FG-128	1
24	Hinge Pin	FG-129	2
25	Swing Support Shaft	FG-118	1
26	Main Roller	FG-113	1
27	Lifting Body	FG-110A	1
28	Extension Spring	01-162	1
29	Micro Switch Touch Block	FG-121	1
30	Micro Switch	Z-15GQ22-B	1
31	Travel Switch Touch Block	FG-078	1
32	Photoelectric Switch	205234	1
33	Left Connecting Block	FG-120	2
34	Protection Frame	FG-140A	1
35	Transition Roller Shaft (short)	FG-119	3

36	Swing Shaft (short)	FG-142	1
37	Micro Switch	MQS-216	1

6.5 Illustration

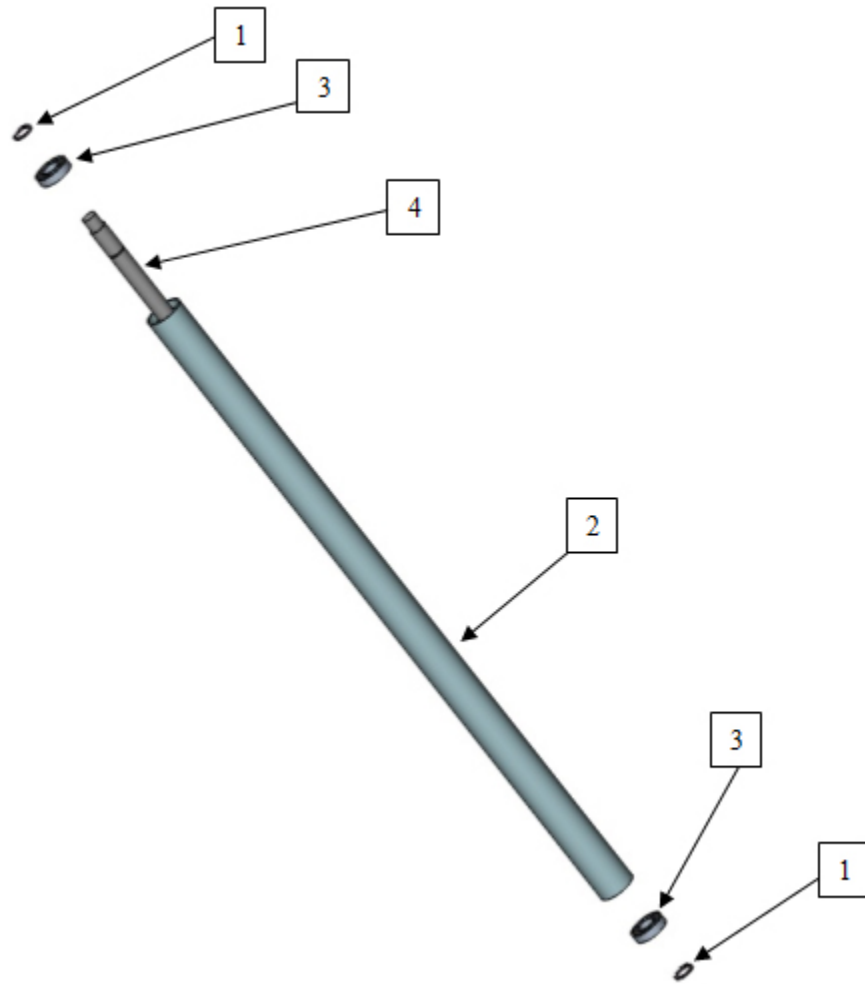
Film Roller



	Name	Part Number	Qty
1	E-Clip	4-MM-EC-2	2
2	Outer Tube Roll	n/a	1
3	Roller Bearing	FG-BR-02	2
4	Inner Shaft	n/a	1
5	Roller Assembly	FG-08-07	1

6.6 Illustration

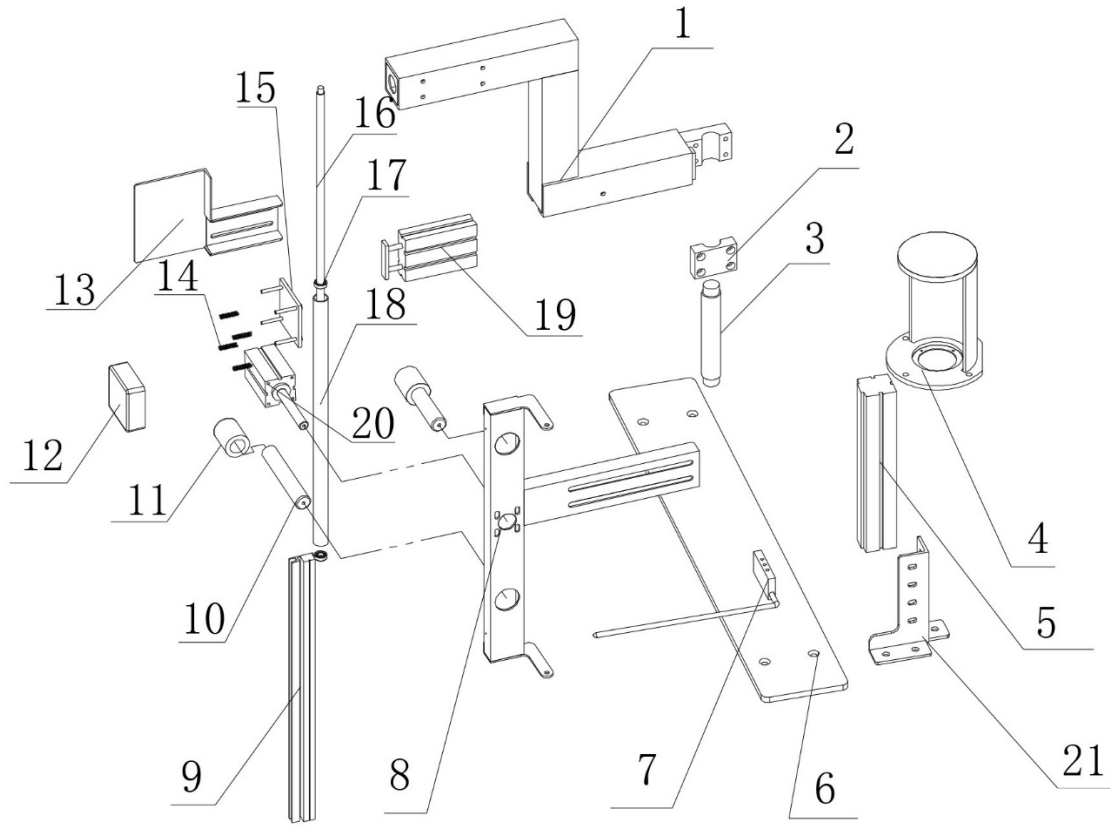
Extended Roller



	Name	Part Number	Qty
1	E-Clip	4-MM-EC-2	2
2	Outer Tube Roll	n/a	1
3	Roller Bearing	FG-BR-02	2
4	Inner Shaft	n/a	1
5	Roller Assembly	FG-08-07	1

6.7 Illustration

Film Lift & Cutting Assembly



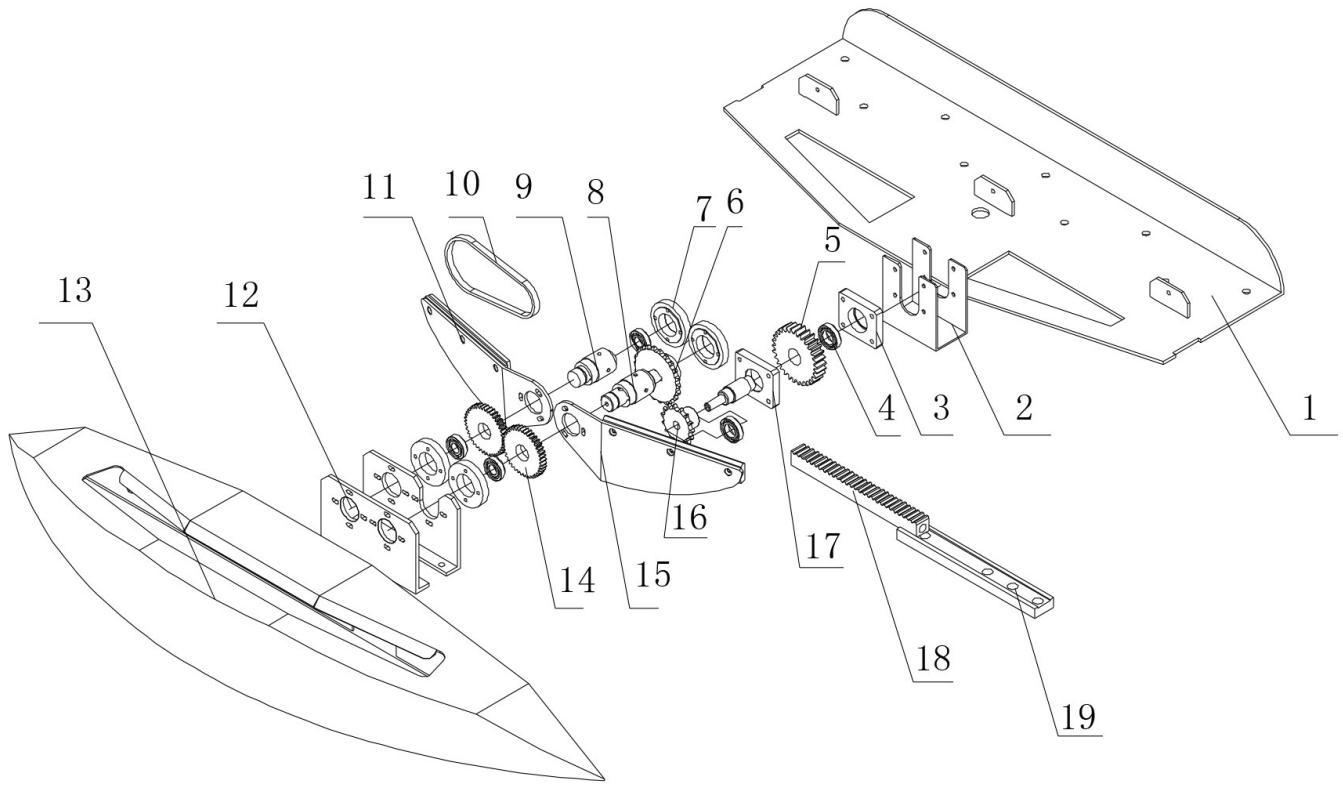
6.7 Illustration

Film Lift & Cutting Assembly - Continued from previous page.

	Name	Part Number	Qty
1	Swing Pole	FG-726F	1
2	Swing Pole Fixed Block	FG-725D	1
3	Swing Axis	FG-722F	1
4	Swing Pole Frame	FG-2923B	1
5	Film Picking Cylinder	DGP-18-200-PPV-A-B	1
6	Swing Pole Bracket	FG-620F	1
7	Film Picking Pole	FG-8280	1
8	Film Brush Frame	FG-727F	1
9	Brush Frame	FG-734	1
	Insulated Board	FG-733	1
	Heating Fuse	3x0.5x500	1
10	Guide Pole	20x30	2
11	Linear Bearing	LM-20UU	2
12	Linear Bearing	001.080.10c	1
13	Film Heating Bracket	FG-8286	1
14	Compression Spring		4
15	Film Heating Bracket	FG-8285	1
16	Idler Wheel Axle	FG-119	1
17	Idler Wheel Bearing	6901	2
18	Roller	FG-115-1	1
19	Film Heating Cylinder	TM-32x30	1
20	Cylinder	SDA-40x70	1
21	Film Lifter Cylinder Bracket	FG-8281	1

6.7 Illustration

Film Nipping Device Assembly

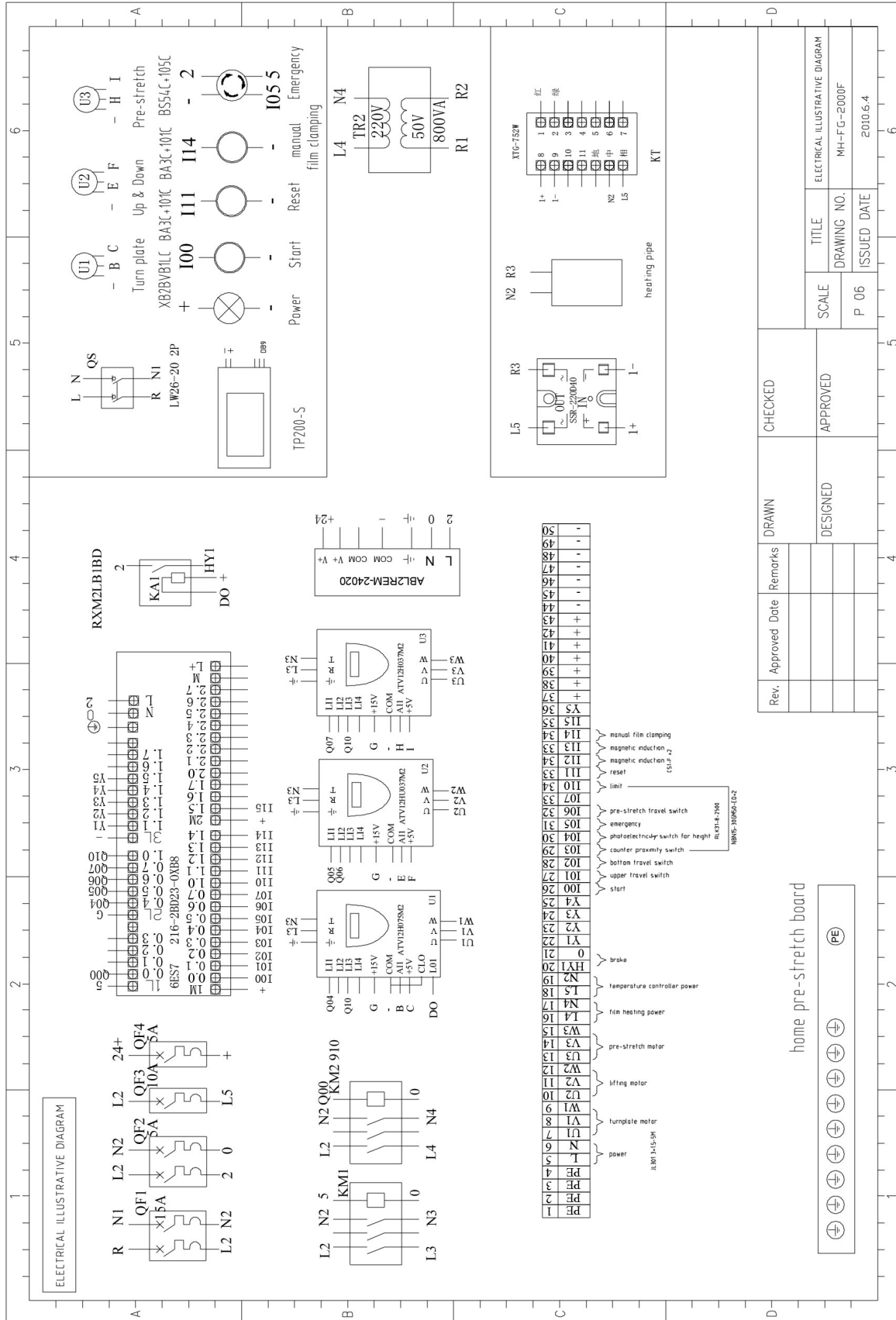


6.7 Illustration

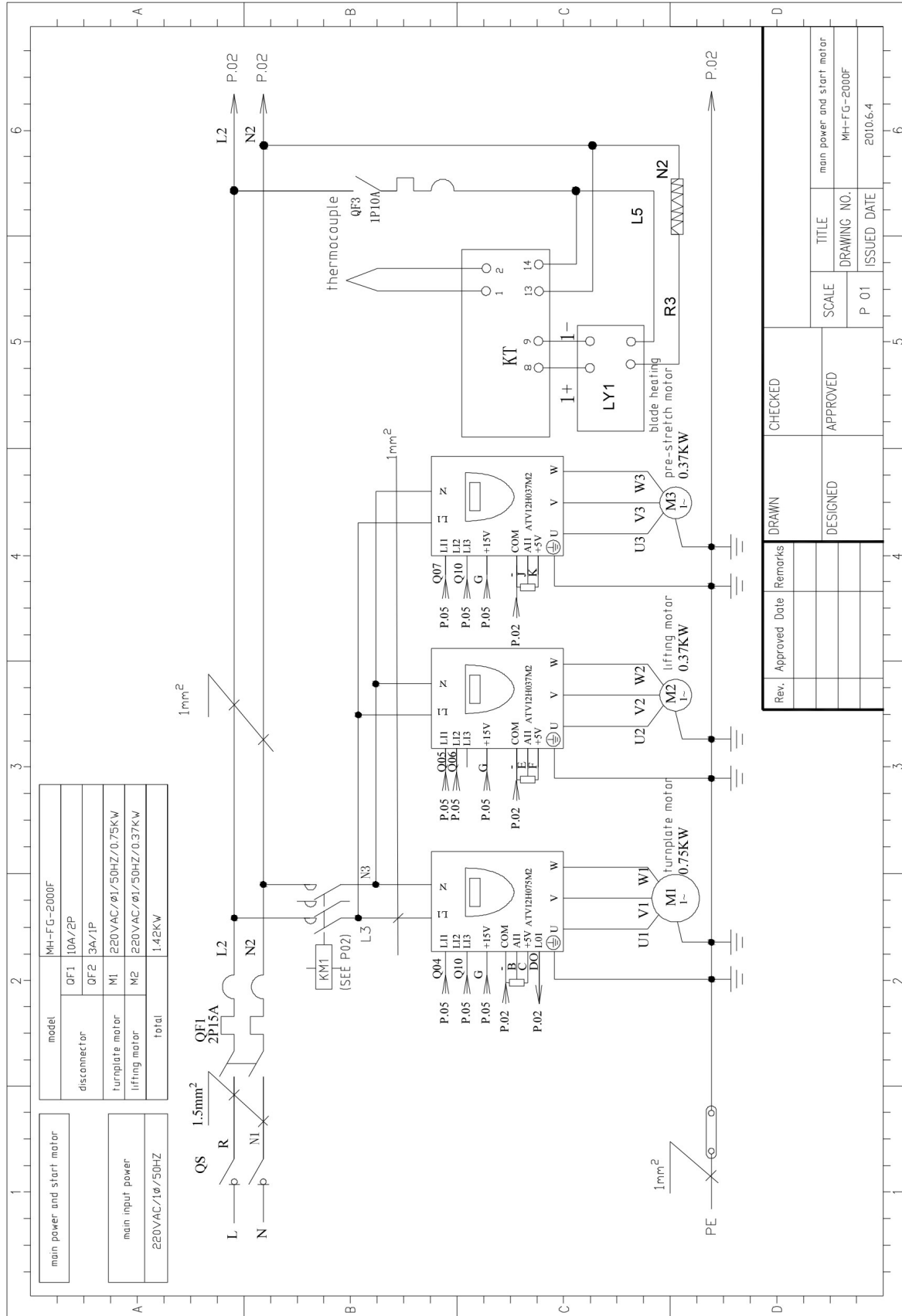
Film Nipping Device Assembly - Continued from previous page.

	Name	Part Number	Qty
1	Film Nip Bracket	FG-3211	1
2	Transition Frame	FG-3255	1
3	Bearing Seat	FG-3253	2
4	Bearing	6094	6
5	Gear	FG-3251	1
6	Driven Chain Wheel	FG-3258	1
7	Film Nip Bearing Fixed Seat	FG-132	4
8	Transition Axis 2	FG-3257	1
9	Transition Axis 1	FG-3256	1
10	Chain	06B	1
11	Film Nip Arm	FG-3268	1
12	Film Nip Bracket	FG-3214B	1
13	Film Nip Cover	FG-3215B	1
14	Gear Wheel	FG-3252	2
15	Film Nip Bracket (reverse)	FG-3268	1
16	Active Sprocket	FG-143	1
17	Bearing Seat	FG-3253	2
18	M2 Rack	FG-3250	1
19	M2 Rack Sliding Rail	FG-3252	1

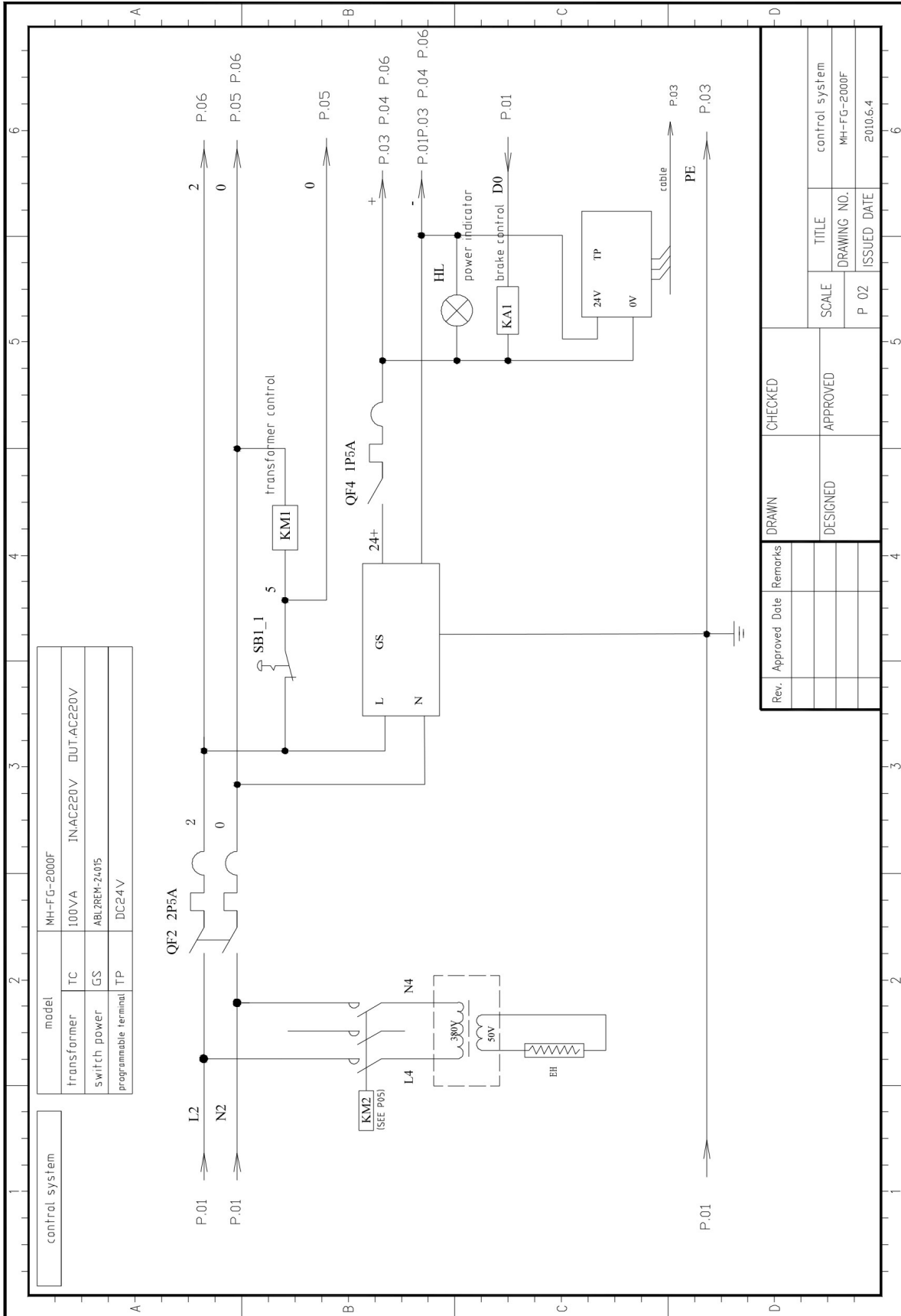
7. Electrical Schematics



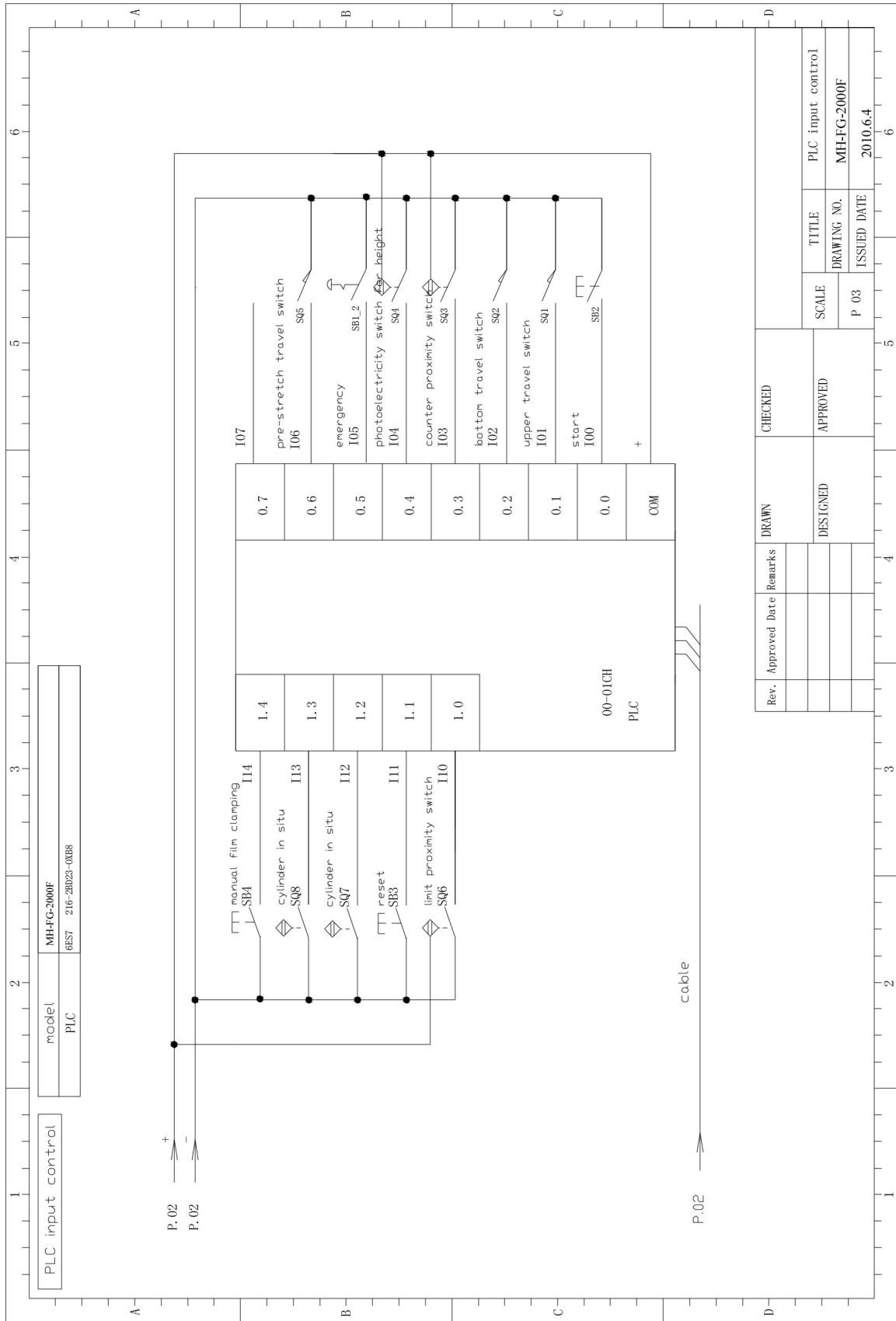
7. Electrical Schematics



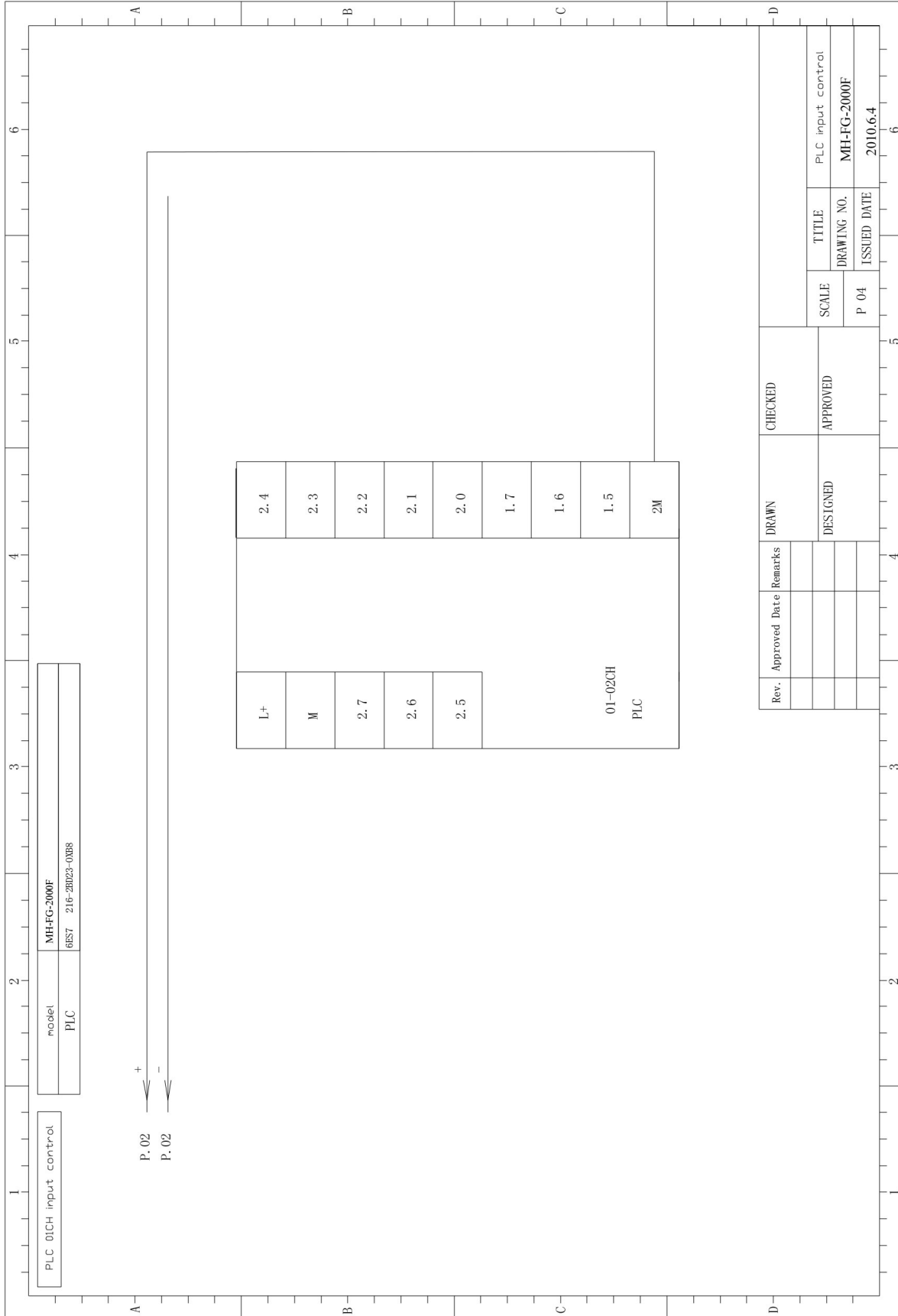
7. Electrical Schematics



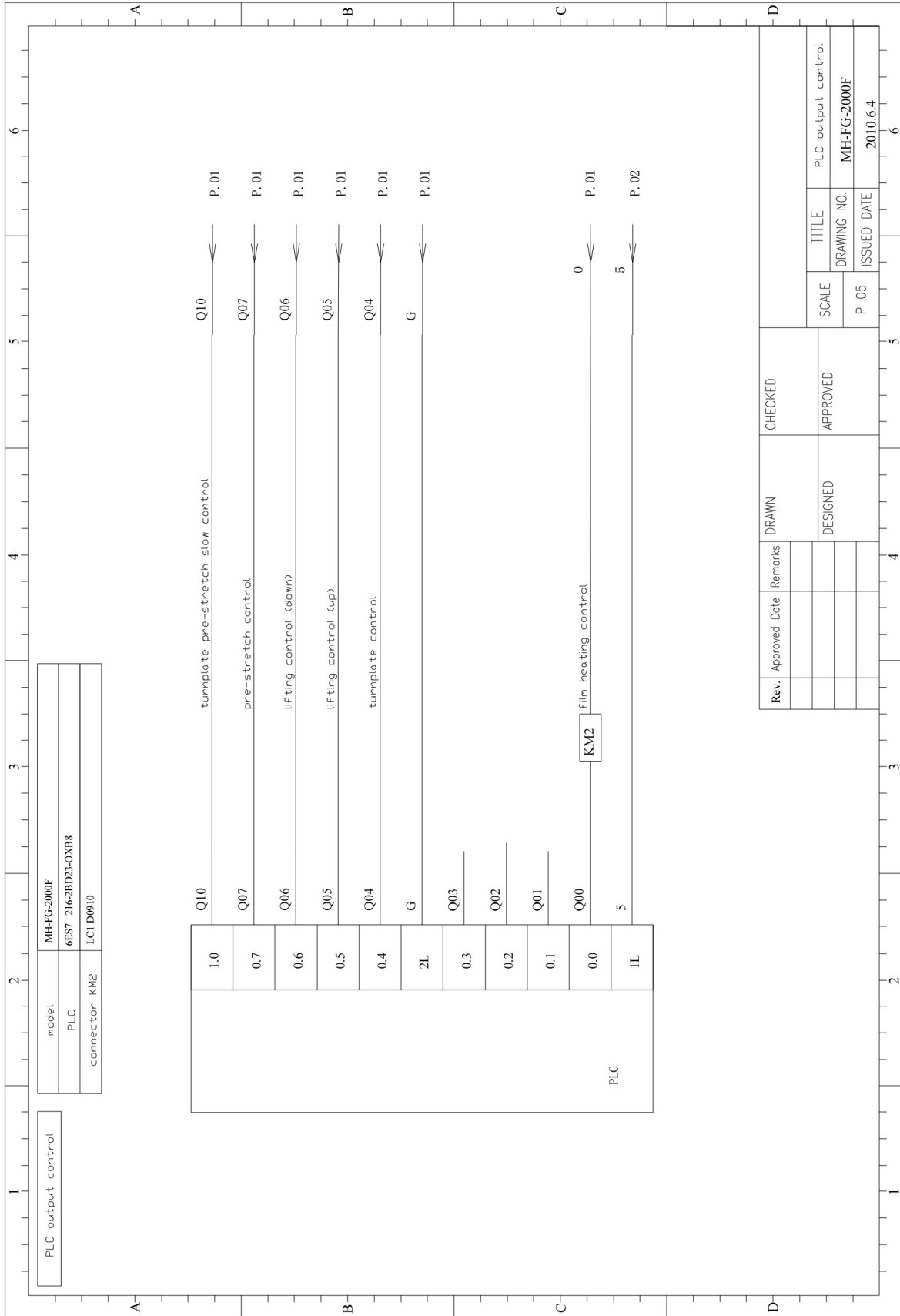
7. Electrical Schematics



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