



Operations Manual



Eagle 1000 Series Stretch Wrapper
Models A & B



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

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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



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



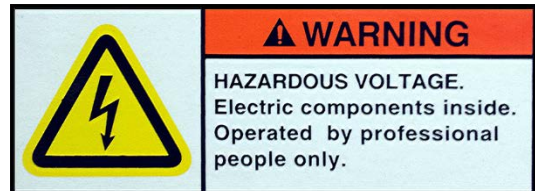
Film Carriage



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 1000A	Eagle 1000B
Power Supply	110VAC, 60Hz	110VAC, 60Hz
Turntable Speed	0-12 RPM	0-12 RPM
Turntable Diameter	59"	59"
Turntable Diagonal	80"	80"
Turntable Height	3.125"	3.125"
Pre-Stretch Motor	N/A	1/3 HP 1390 RPM 220V 1:20 Gearbox
Pre-Stretch Gear Ratio	N/A	1:12
Pre-Stretch Chain	N/A	06B-1 ISO
Film Stretch	Manually Adjustable on Carriage	250% pre-stretch with adjustable load force
Film Lift	Photo-eye controlled to match pkg height ¹	Photo-eye controlled to match pkg height ¹
Film Width	20" (standard)	20" (standard)
Max Film Height	87"	87"
Mast Height	94"	94"
Max Turntable Weight Capacity	3500 lbs	3500 lbs
Max Package Height (2" Overlap)	85"	85"
Machine Dimensions	96.5" x 59" x 96.85" (L x W x H)	96.5" x 59" x 96.85" (L x W x H)
Shipping Weight (approx. on skid)	1,200 lbs	1,250 lbs
Attachment	Ramp or Custom Heavy Duty ²	Ramp or Custom Heavy Duty ²
Noise	≤75db	≤75db
Environment	Humidity ≤98% Temperature 32-104°F	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.

1.3 Outline and Application Field

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

The operator must stand in front of the operating screen, away from the turntable and carriage. The operator must insure that no other individual or devices such as the forklift are at risk during operation. (See Fig. 1-1)



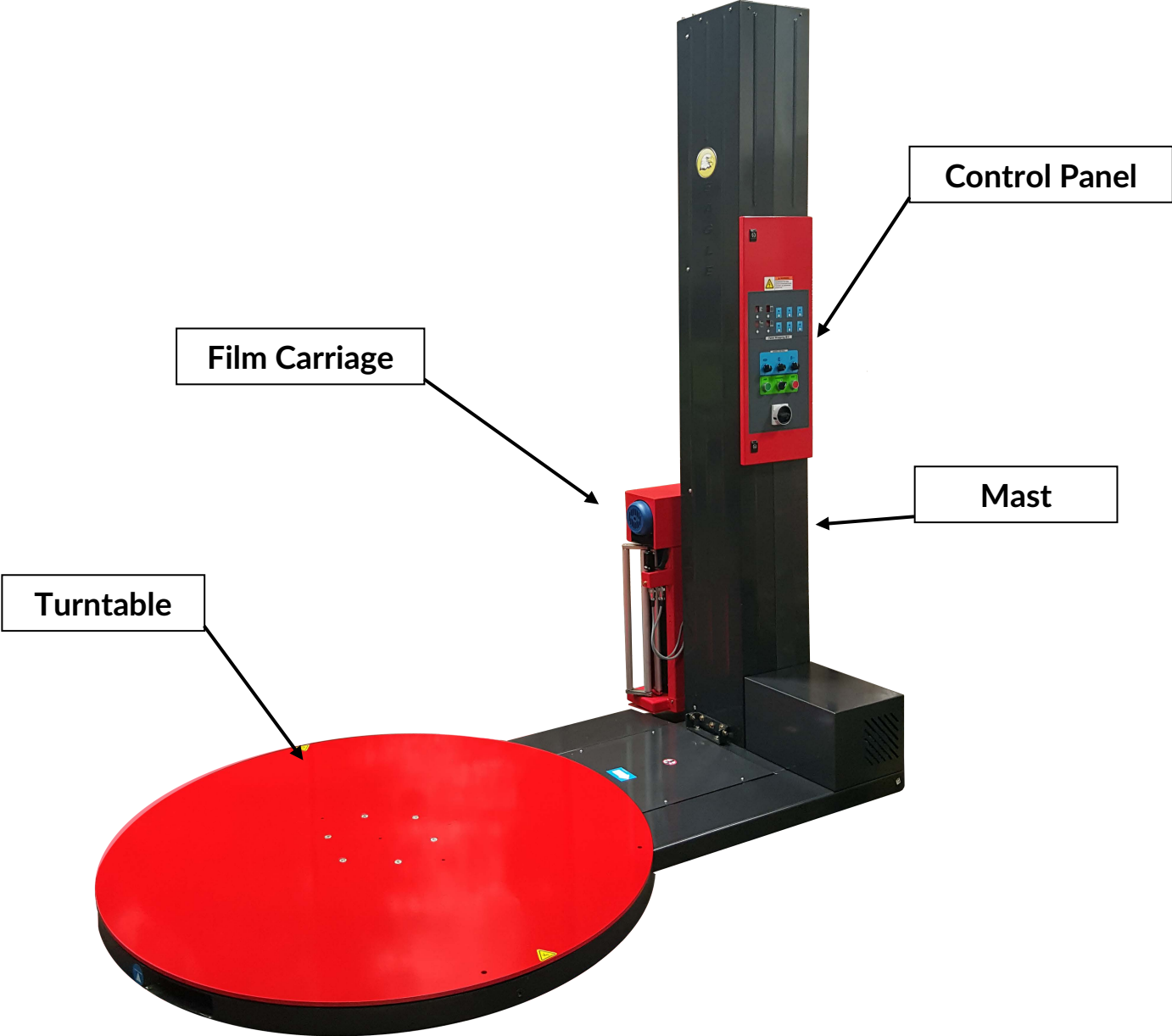
Fig. 1-1

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

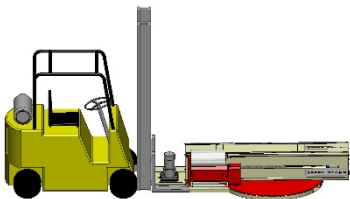
You must have at least 4ft fork tubes or tube extensions fully inserted into the machine and a forklift rated for 3,000lbs to transport the machine safely. Do not raise the load more than 6" off of the ground. (See Fig. 2-2)



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

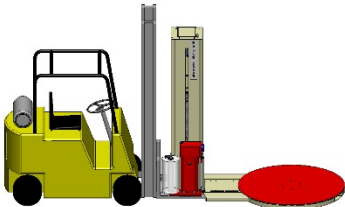


Do not transport machine from turntable when mast is lowered!

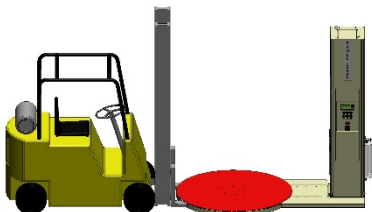


When transporting the machine in this configuration;

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



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.

Fig. 2-2

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)

Step 2 - Remove M8 screws that will secure mast to base.

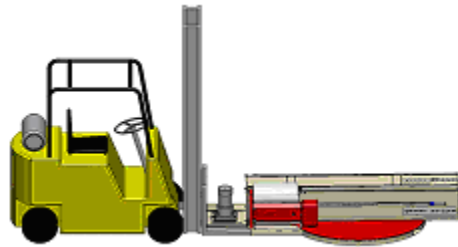


Fig. 2-3

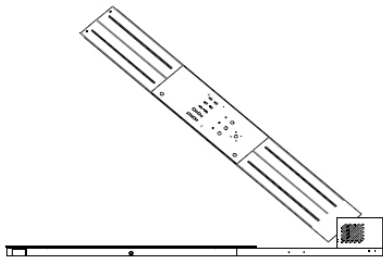


Fig. 2-4a

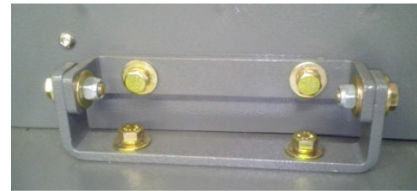


Fig. 2-4b

Step 3 - While lifting the mast, use caution to ensure that wires and connectors are not pinched. (See Fig. 2-4a)

Once the machine is fully upright, one individual can stabilize the mast while a second individual fastens the M8 screws to secure the mast to the base. (See Fig. 2-4b)

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. 2-5)

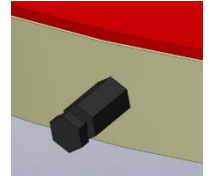


Fig. 2-5

Step 4a (Eagle 1000B) - Remove M8 screws from rear of carriage. Affix the carriage onto the corresponding position on the mast and fasten with four M8 bolts. Insert the connector plugs on the front of the carriage into the receptacles. Do not force the connectors together. (See Fig. 2-6)

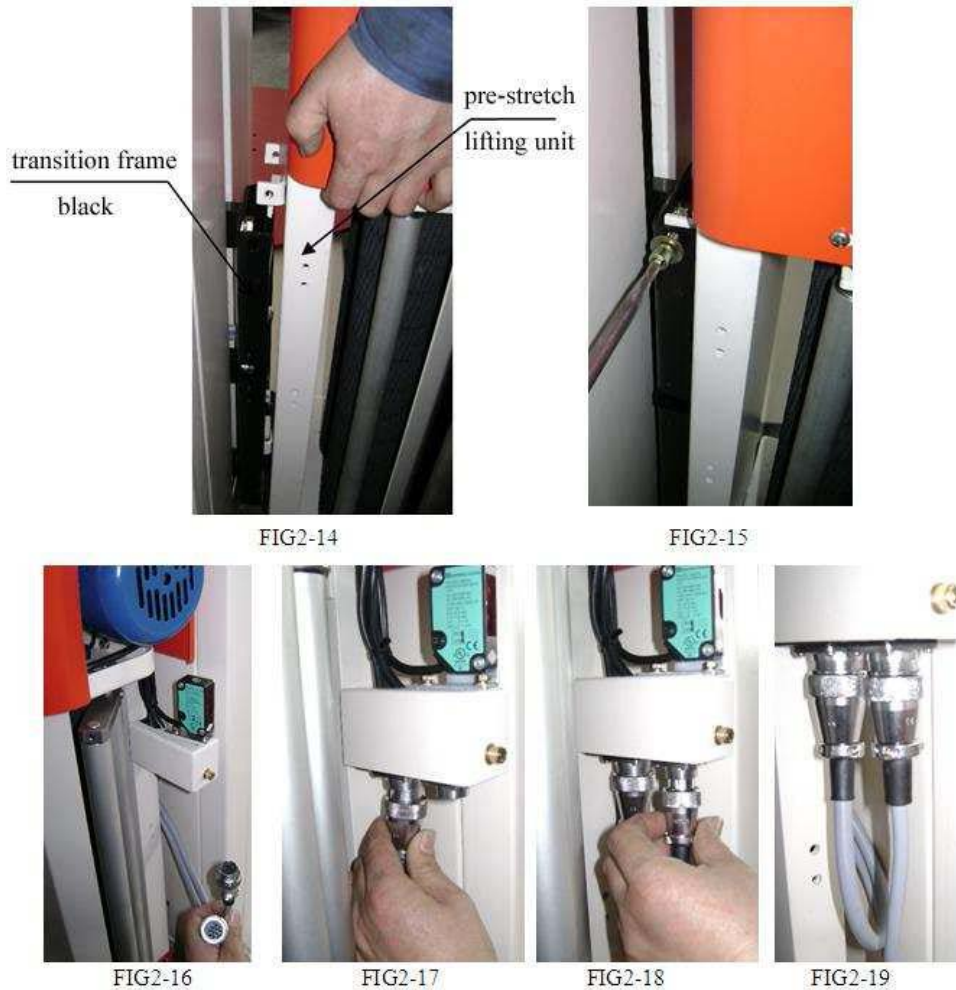


Fig. 2-6

2.3 Installation

Step 4b (*Eagle 1000A*) - Insert the connector plug inside the bottom of the mast into the corresponding receptacles. (See Fig 2-7)

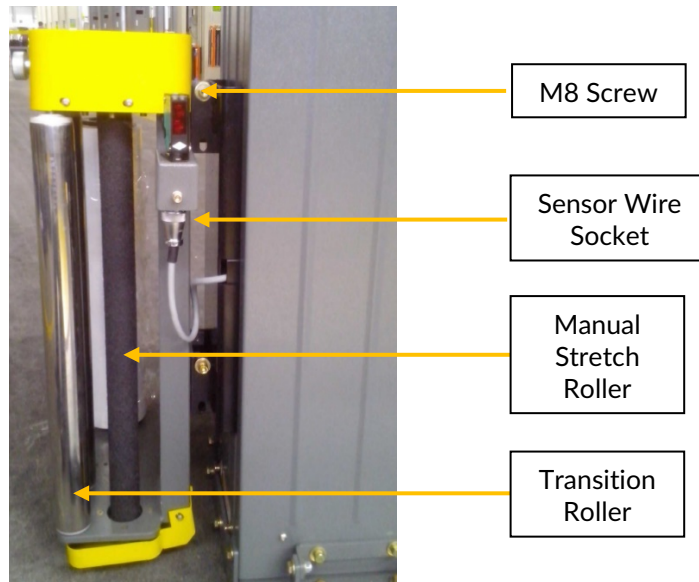


Fig. 2-7

Step 5 - Verify that all screws are tight and then turn on the power. Verify power indicator is on.

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 pre-stretch carriage (Eagle 1000B)

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 fasteningscrew "A". (See Fig. 3-1)

Step 4 - Push down handle to open carriage door. Then pass the film through the carriage. Pass the film behind the first roller then between the first and second roller. (See Fig. 3-3)

Note; It is easier to close the door if you create 2 Pockets of loose film between the 3 rollers in the Door to accommodate the pre-stretch rollers Opposite in the carriage.

Close the door while pushing down the handle (do not slam).

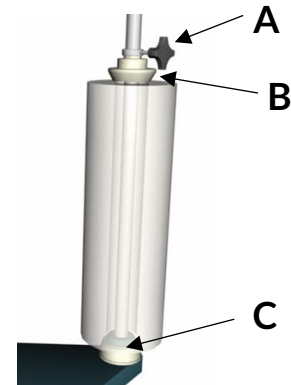


Fig. 3-1

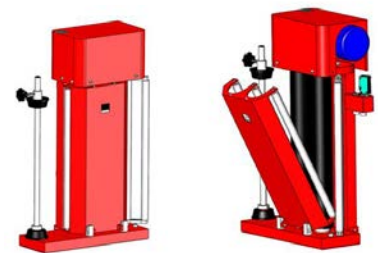


Fig. 3-2

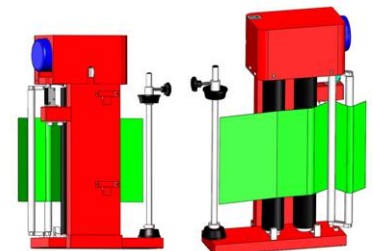


Fig. 3-3

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.

3.1 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 non pre-stretch carriage (Eagle 1000A)

Step 1 - Loosen fastening screw "A" and take off roll holder "B". (See Fig. 3-4)

Step 2 - Center the film core over the film shaft and lower onto the lower orientation plate "C" of the film shelf. (See Fig. 3-4)

Step 3 - Mount roll holder "B" and re-tighten fasteningscrew "A". (See Fig. 3-4)

Step 4 - Thread film through rollers. (See Fig. 3-6)

Step 5 - Turn tensioning handle (1) then adjust film tension amount by using knob (2). (See Fig. 3-5 and Fig. 3-6)

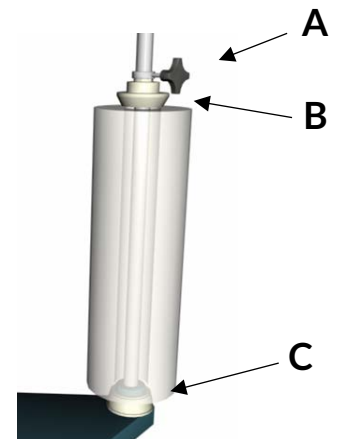


Fig. 3-4



Fig. 3-5

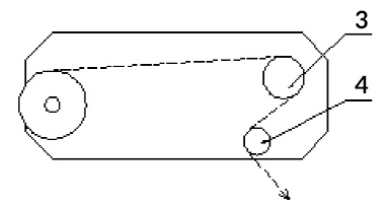
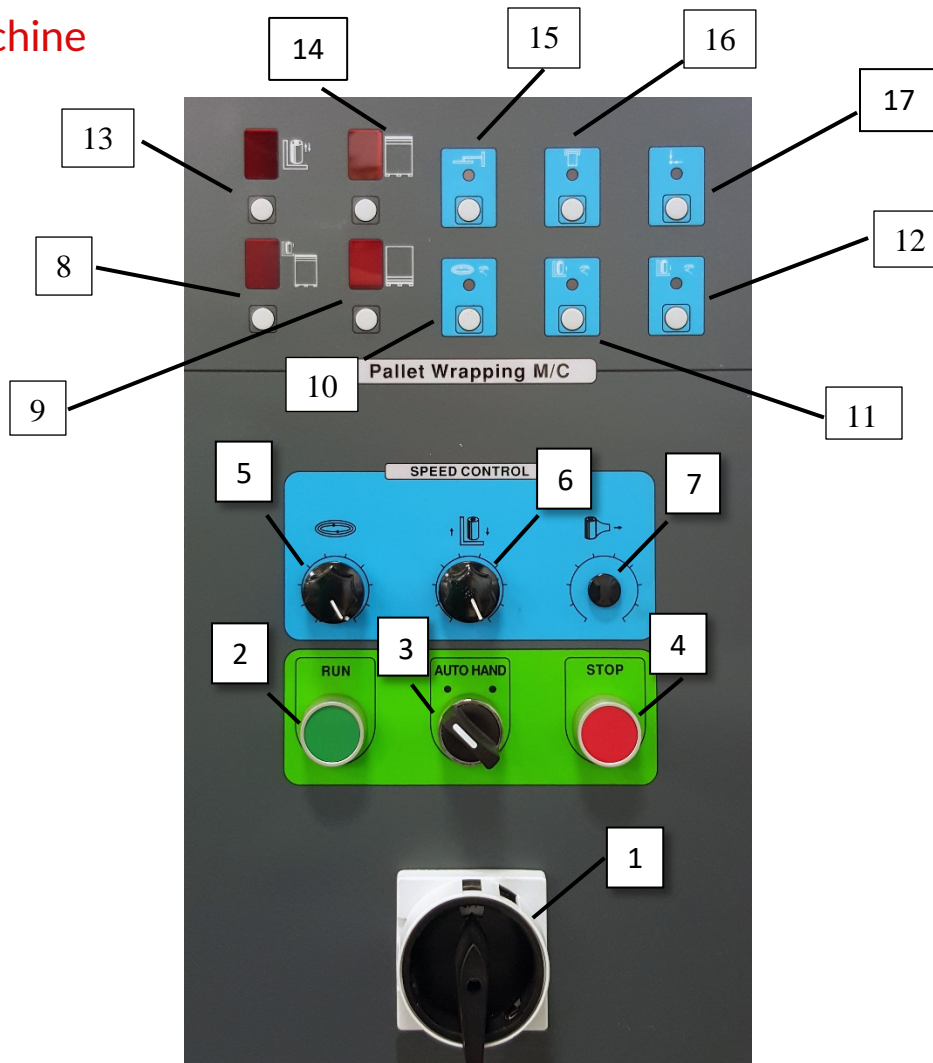


Fig. 3-6

3.2 Basic Machine Operation



1. Power Switch	9. Bottom Wrap Cycles
2. Start Button	10. Turn Table Indicator
3. Automatic / Manual Mode Switch	11. Up, Carriage
4. Stop	12. Down, Carriage
5. Turntable Speed	13. Up/Down Cycles
6. Carriage Speed	14. Top Wrap Cycles
7. Film Tension (1000B)	15. Not Programmed
8. Photo Eye Delay	16. Top Wait
	17. Reset

1. **POWER SWITCH**- Turns power ON and OFF to machine.
2. **START/RUN**- Starts wrapping cycle when the machine is set in Auto mode (No.3, Auto/Hand).
3. **AUTO/HAND**- Switches machine between Auto (Automatic) and Hand (Manual) modes. Auto Mode will wrap the bottom of the pallet twice, wrap to the top of the load, wrap the top twice, wrap down to the pallet and wrap twice more.

Hand or Manual Mode the operator can select different options here to override the Auto functions. By selecting the button below the picture of the turntable (10) the operator can start or stop the turn table. By selecting the button below the picture of the carriage with the up arrow (11) the operator can start and stop carriage going up. The operator may use button (12) to start and stop carriage moving down. The turntable speed and film tension adjustment (1000A) or film tension knob (1000B) can be adjusted to achieve desired film stretch or load force.

4. **STOP-** Stops machine from running. Should be used in cases of EMERGENCY or to stop machine for any reason. Reset (9) may need to be pushed to operate machine after STOP is used.

5. **TURNTABLE SPEED ADJUSTMENT-**Operator may use this knob to adjust rotation speed of the turntable.
The turntable speed and film tension (7) work in conjunction. If the turntable speed is increased, film tension will need to be decreased to maintain the same load force. If the turntable speed is decreased, film tension will need to be increased to maintain the same load force. On 1000A Models Film Tension is adjusted on the carriage (Fig. 3-5).

6. **FILM CARRIAGE SPEED ADJUSTMENT-** This adjustment varies the speed at which the film carriage/film travels up and down the mast.
A slow film carriage speed will allow more layers of film to cover the load as it rotates.
A faster film carriage speed will lay fewer layers of film to cover the load as it rotates.

7. **FILM TENSION ADJUSTMENT- (1000B ONLY)** This adjustment varies the tension on the film as it is added to the load. NOTE: Film tension and turntable speed work in conjunction. Use Turntable Speed Adjustment (5) and Film Tension Adjustment (7) to achieve desired film tension.
(1000A) Film Tension Adjustment is the silver knob on the front of the carriage. Disengage Locking Arm on top of carriage, set film tension using knob and re-engage Locking Arm. Use Turntable Speed Adjustment and Silver Knob (Film Tension Adjustment) to achieve desired film tension.

8. **CARRIAGE HEIGHT ADJUSTMENT-**This adjustment determines how high above the load the Carriage/Film will travel.

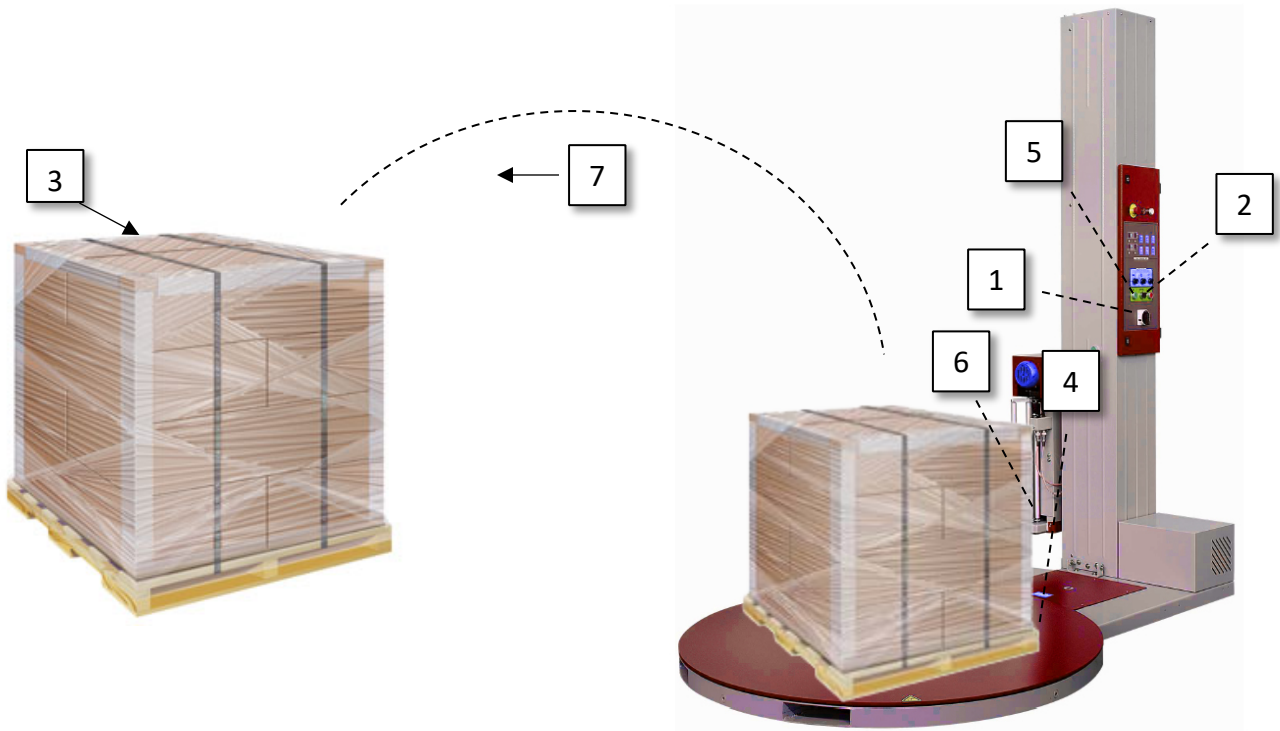
9. **BOTTOM WRAP CYCLE ADJUSTMENT-** This adjustment varies the number of times the load will
Be wrapped at the bottom.

10. **TURNTABLE INDICATOR-**In AUTO (3) this light will come on when turntable is engaged.

In HAND (3) Operator can push Button (10) to engage and disengage turntable.
TIP: Use TURNTABLE SPEED ADJUSTMENT to vary rotation speed.

11. UP FILM CARRIAGE INDICATOR- In AUTO (3) the light will come on when Carriage/Film is moving up the load.
In HAND (3) Operator can push Button (11) to move Carriage/Film up.
12. DOWN FILM CARRIAGE INDICATOR- In Auto (3) this light will come on when carriage is moving down the load.
In HAND (3)- Operator can push button (12) to move carriage down the load.
13. WRAP CYCLE ADJUSTMENT- This adjustment determines how many times the film carriage/film will travel the height of the load.
NOTE: ie. Once up and once down =2.
14. TOP WRAP CYCLE- This varies the number of times the load will be wrapped at the top.
15. TOP PRESS FUNCTION- This function is for a top press attachment not sold on standard machines. If the machine does not have a top press attachment, this button should not be pressed. If pressed without attachment, this will make the machine not work in auto-mode. If light is red, press button again and machine should work again.
16. TOP WAIT- In AUTO (3) if button is pushed and light appears. When start is pushed load is wrapped as usual until film carriage reaches the top of the load and stop. Allowing operator to place cover or lid on load. Once cover is in place pushing START will continue the wrap cycle.
17. RESET- When Stretch Wrapper has been Stopped mid cycle. RESET light will illuminate. Operator must push button to RESET Stretch wrapper. Carriage and Turn Table will return to their HOME positions. RESET light will turn off once they have arrived HOME.

3.2 Basic Machine Operation



Step 1 – Turn on the power to the machine.

Step 2 – Using the Auto/Hand switch, select AUTO.

Step 3 – Place the load to be wrapped onto the turntable.

Step 4 – Connect the loose end of the stretch film to the bottom of the load (ie: corner of the pallet)

Step 5 – Press the start button to begin wrapping the load.

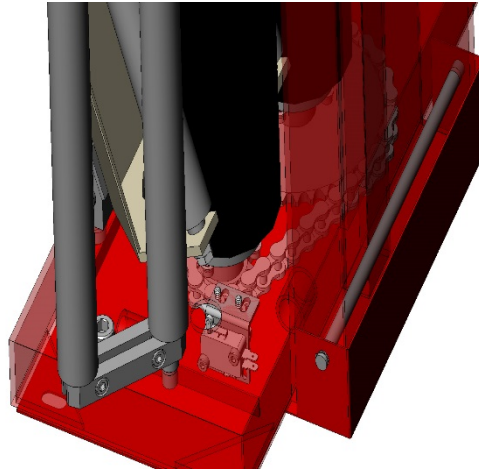
Step 6 – Once the job finishes, break the film between the stretch wrapper and the now wrapped load and secure any loose ends of film.

Step 7 – Remove the load from the turntable and place the next load onto the turntable.
Repeat steps 2-7 as required

4.1 Carriage Load Safety Switch (Eagle 1000B)



**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

4.2 Turntable Home Switch



BE SURE TO DISCONNECT ALL POWER TO THE MACHINE PRIOR TO ANY MAINTENANCE WORK

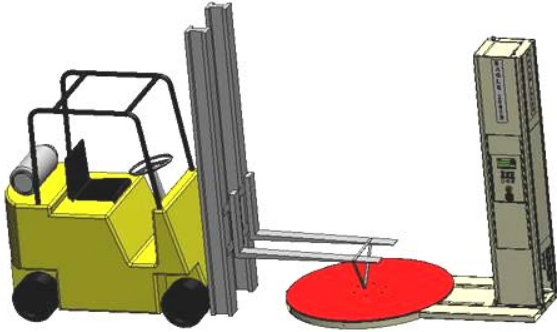


Fig. 4-1



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

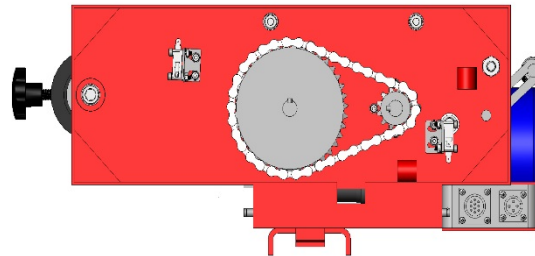


Fig. 4-3

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

4.3 Turntable Idler Wheels

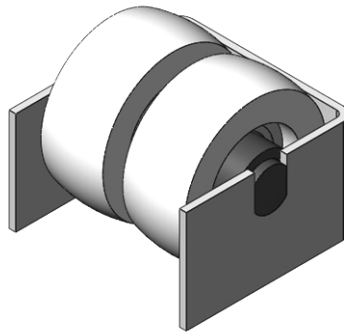


Fig. 4-4

- 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)

4.4 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 in has no power or bad outlet. *Power cord has been damaged. *Machine internal circuit breaker has been tripped. 	<ul style="list-style-type: none"> *Plug machine into 110VAC outlet *Check to see if outlet has power. *Call service for new power cord. *If machine breaker is tripped call tech. support.
Machine has power and will not function	<ul style="list-style-type: none"> *E-Stop is pushed on main panel. *Carriage Base safety switch is pushed. *Film Feed Door is not closed properly. *Drive Displays should read "rdy" For them to be ready. 	<ul style="list-style-type: none"> *Check all E-Stop's and for debris under carriage. *Adjustment may be needed to carriage safety switch reference 4.1 Carriage Load Safety Switch *Close Film Door with a firm push, Do Not slam or force. *If Drives Do Not display "rdy" Call tech. support.

Machine will not stop at home	<ul style="list-style-type: none"> *Bad connection between mast and turn table. *Bad Limit Switch or needs adjustment. 	<ul style="list-style-type: none"> * This input will only illuminate when the Limit Switch is activated. * Tighten or replace connectors, check to ensure there are no pinched wires. * Replace or adjust Limit Switch so that it rides on cam properly.
Machine will not start job after reset	<ul style="list-style-type: none"> *Input 04 is not lit. *Photo Eye is not seeing load. 	<ul style="list-style-type: none"> *Photo Eye is not sending signal to PLC. *Ensure on Photo Eye both green and amber lights are on when load is in place. *Call tech. support.
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 the minimum setting. *Check to see if Chain is broken or disconnected. *Carriage Slide Block is jammed-realign Slide Block. 	<ul style="list-style-type: none"> *Plug machine into adequate power 110 Volt outlet. *Adjust carriage speed (6) turn clockwise for faster speed. *Replace or re-install Chain/ remove any debris. *Loosen slider blocks to realign and lubricate with a dry lube.
Film Breaks	<ul style="list-style-type: none"> *Speed is not set well between Turn Table (5) and Load Force (7). *Check for cuts in film. *Move dancer bar without film to see if motor is turned on. *Pre-Stretch chain is broken or jammed. 	<ul style="list-style-type: none"> *Turn Load Force (7) counter clockwise to let off tension. Add force slowly until desired tension is reached. *Replace roll of film. *Faulty Drive/look for "rdy" on display. *Reinstall or replace chain (06B)
Scale does not work	<ul style="list-style-type: none"> *Is the machine level *Are all of the leveling feet touching? 	<ul style="list-style-type: none"> *Place machine in level location *Adjust all feet so they are in solid contact with floor, tighten lock nuts.

4.5 Turntable & Carriage Adjustment

Test Operation

Turntable

- Turn on the power
- 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 the carriage up button to send the film carriage up the mast.

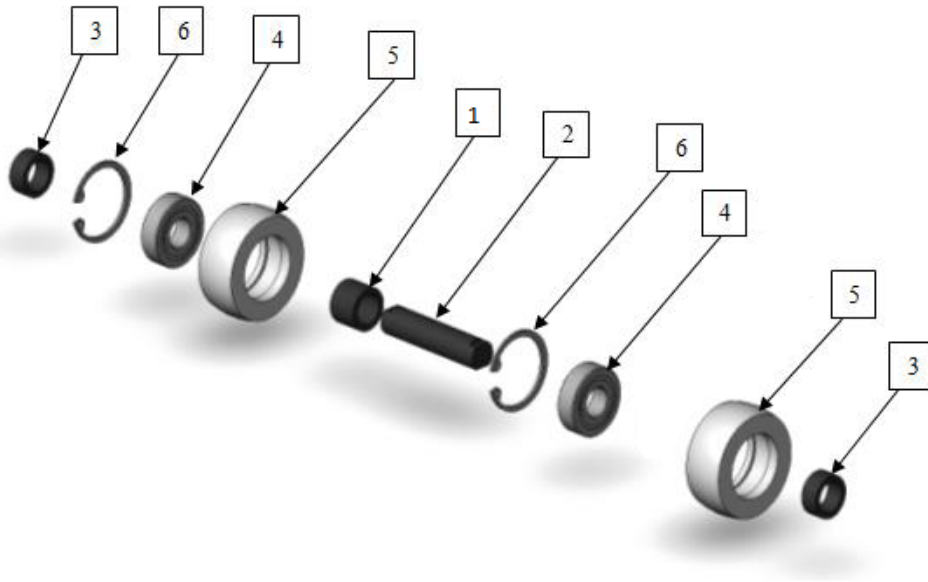


Press the carriage down button to send the film carriage down the mast.

- Raise the carriage and 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.

5.1 Illustration

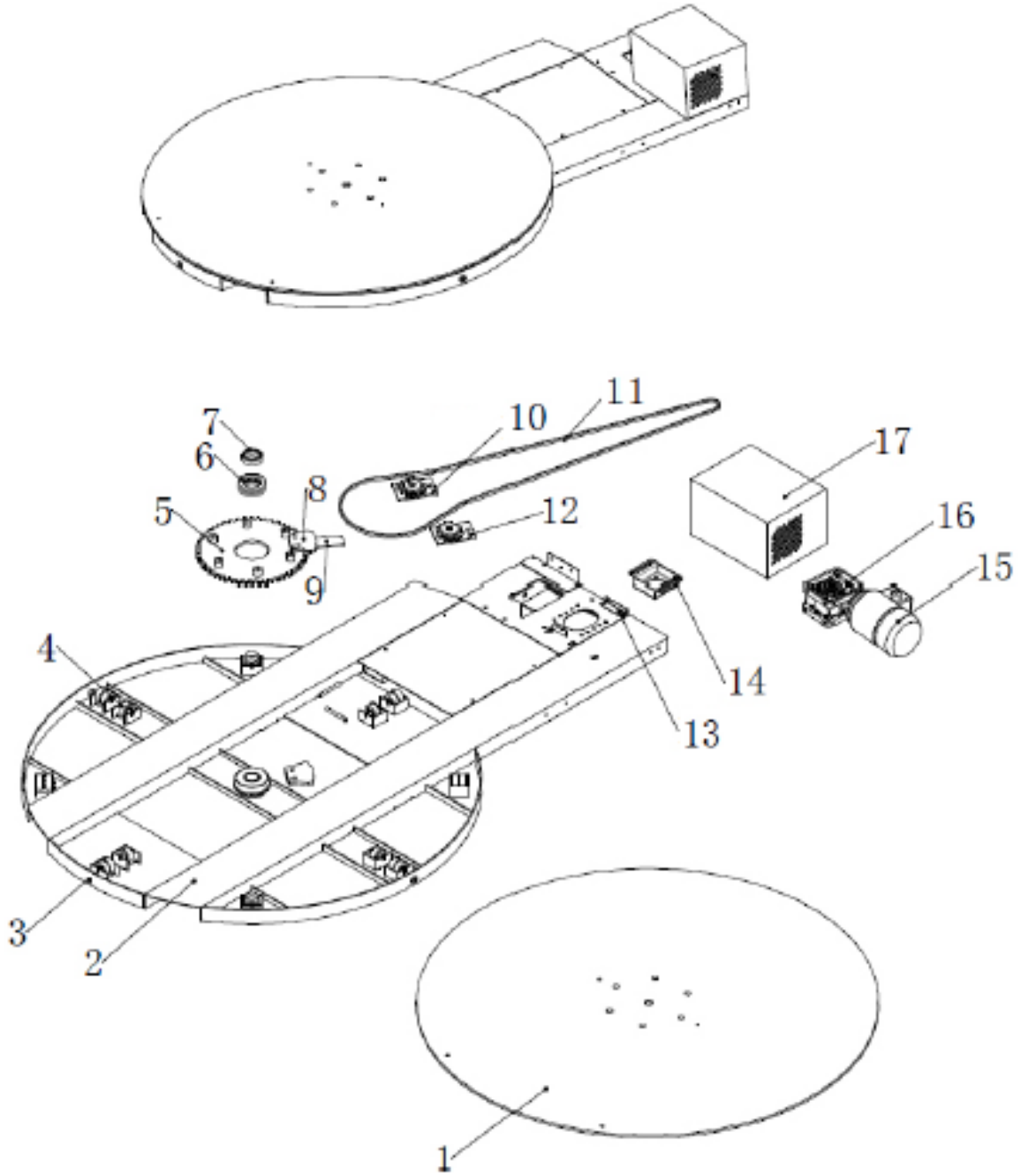
Roller Wheel Assembly - FG-01A-20A (can be ordered as set)



	Name	Part Number	Qty
1	Inner Ring	FG-01A-23-I	12
2	Idler Wheel Axle	FG-01A-24	12
3	Outer Ring	FG-01A-23-O	24
4	Bearing	60202	24
5	Idler Wheel	FG-01A-21	24
6	Internal Snap Ring 34mm	98455A131	24

5.2 Illustration

Base



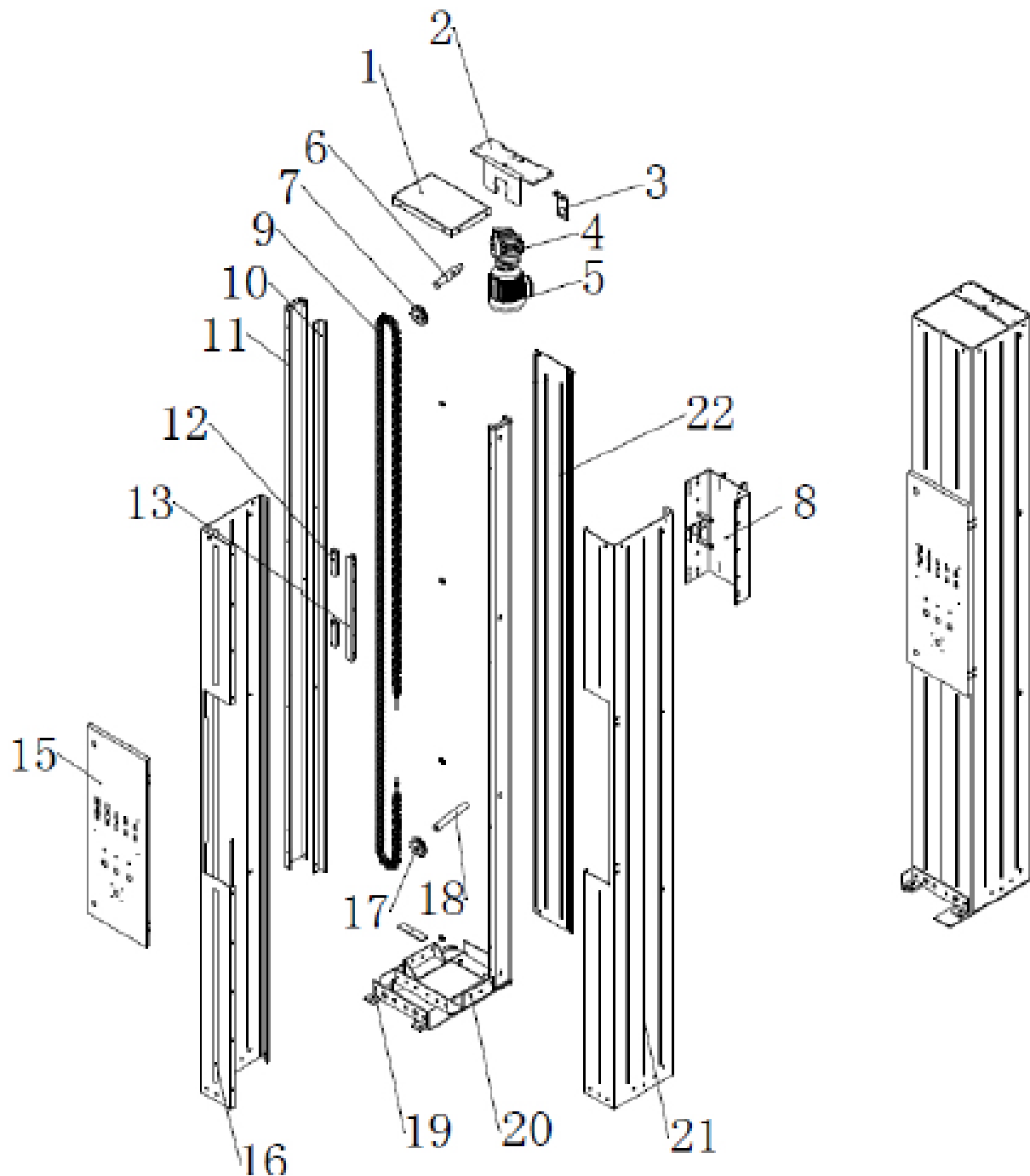
5.2 Illustration

Base (continued)

	Name	Part Number	Qty
1	Turntable	FG-01A-19	1
2	Base	FG-7000	1
3	Ramp Bolt	RAMPBOLT	1
4	Idler Wheel Assembly	FG-01A-20A	12
5	Big Wheel Sprocket	FG-01A-13	1
6	Bearing (3 pieces)	51213	1
7	Bearing	6009ZZ	1
8	Limit Switch Block	FG-12A-16	1
9	Limit Switch	NLCA2	1
10	Idler Gear without slot	FG-01A-18	1
11	Chain	12A	1
12	Idler Gear with slot	FG-01A-18S	1
13	Motor Cover Fix Part (2)	FG-376B	1
14	Motor Base	1010.80.10.PL	1
15	Main Motor	YS7134/B14	1
16	Reducer	NMRV050/3071B14	1
17	Motor Covering Plate	FG-374B	1

5.3 Illustration

Mast



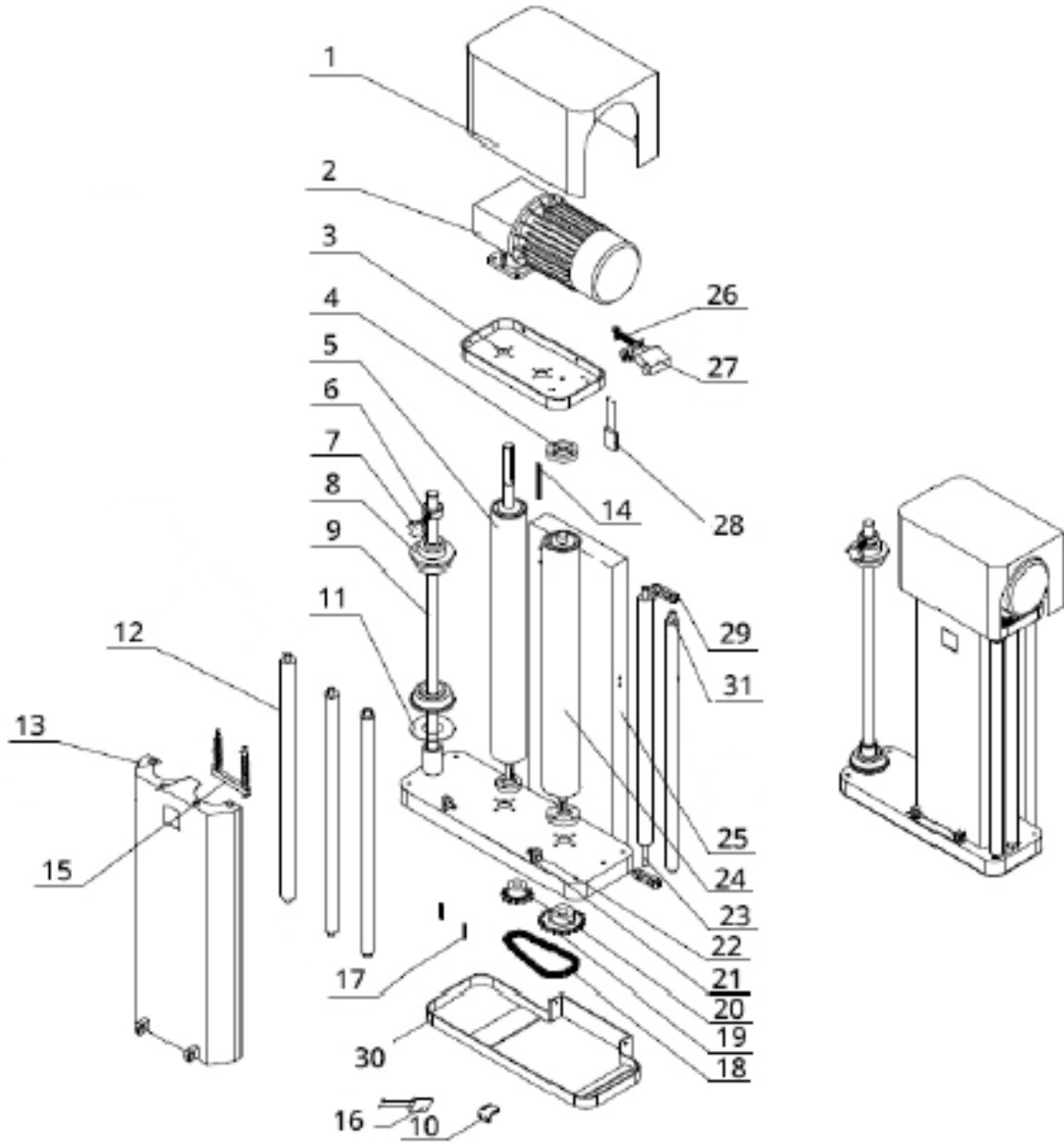
5.3 Illustration

Mast (continued)

	Name	Part Number	Qty
1	Mast Cover Plate	FG-389B	1
2	Mast Cover Bracket	FG-388B	1
3	Reduction Gear Bearing Base	FG-398B	1
4	Lift Motor	YS6334/B14	1
5	Gear Reducer	NMRV040/60	1
6	Motor Shaft	FG-390B	1
7	Drive Sprocket	FG-060	1
8	Lift Frame	FG-370B	1
9	Chain	08B	2
10	Slide Way	FG-393B	2
11	Support Iron Box	FG-392B	2
12	Sliding Rail	FG-AL-01	4
13	Sliding Block Base	FG-12-08	2
14	PC-Board	DBC2000E2013	1
15	Door	FG-399B	1
16	Left Column	FG-385B	1
17	Drive Chain Wheel	FG-061	1
18	Drive Shaft	FG-059	1
19	Column Bottom Plate	FG-394B	1
20	Column Bottom Plate	FG-387B	3
21	Right Column	FG-386B	1
22	Column Front Cover Plate	FG-373B	1

5.4 Illustration

Pre-Stretch Carriage



5.4 Illustration

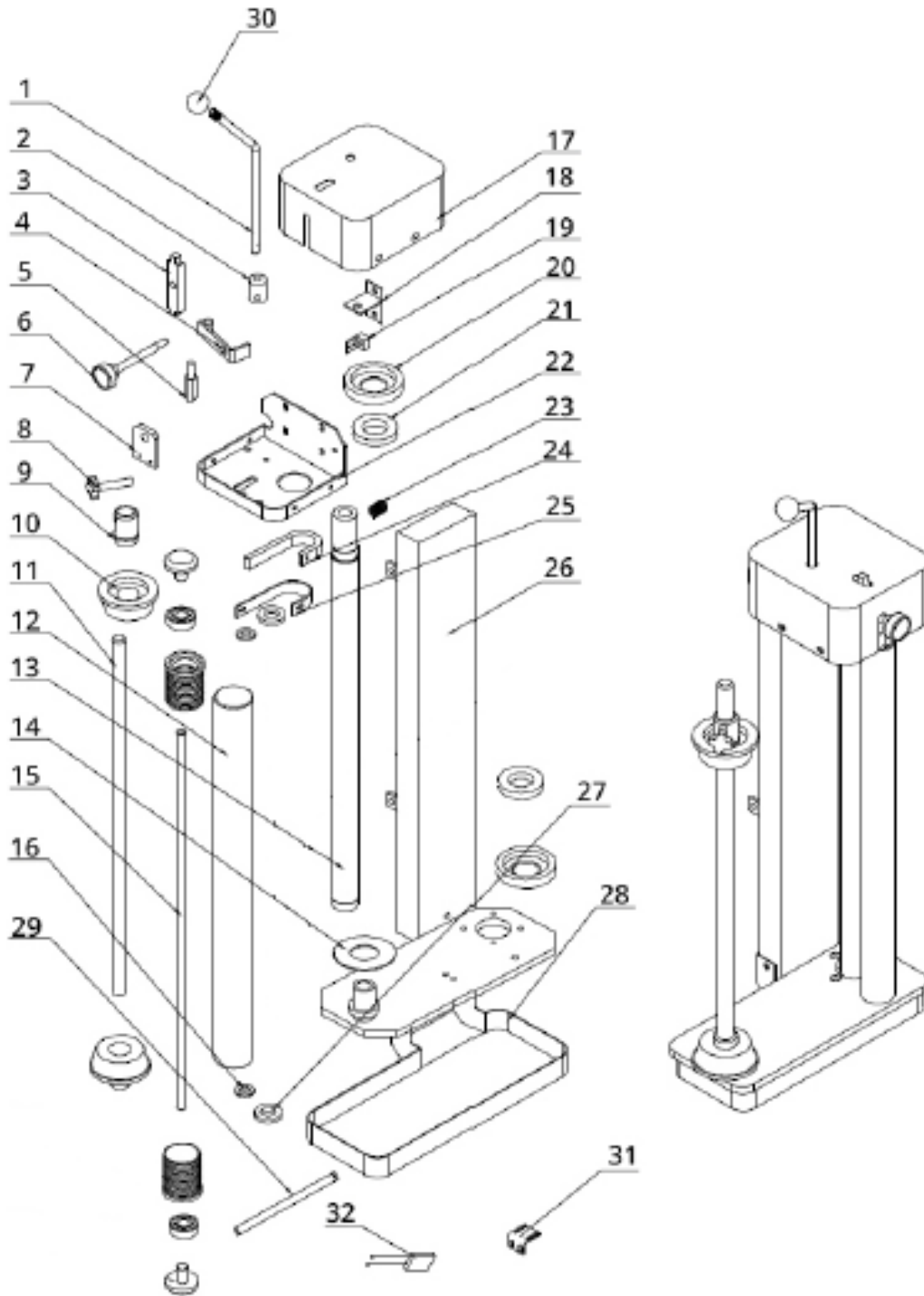
Pre-Stretch Carriage (continued)

Please note that the standard carriage is 20in. If you have a 30in carriage, please add -30 to the part number of any part marked with an *

	Name	Part Number	Qty
1	Motor Cover	FG-08T-20	1
2	Pre-Stretch Motor	NMRV040/10-YS6344	1
3	Carriage Base Plate	FG-08T-02	1
4	Bearing 20mm	5972K168	3
5	Main Roller	FG-03-02	1
6	Hub	FG-038A	1
7	Knob	FJG-1A-197SW	1
8	Film Orientation Plate	FG-03A-20	2
9	Film Rod*	FG-03A-16	1
10	Micro Switch Frame	1060.180.1.PL	1
11	Metal Spacer	FG-2526	1
12	Film Roller Assembly*	FG-08-07	5
13	Carriage Door*	FG-08-14	1
14	Key 1	6x6x60mm	1
15	Pin Release Bar Assembly	FG-08-19A	1
16	Micro Switch	MQS-216	10
17	Key 3	5x5x14mm	2
18	Chain	06B	1
19	Large Carriage Gear	FG-03-14	1
20	Small Carriage Gear	FG-03-12	1
21	Lower Hinge	FG-128	1
22	Hinge Pin	FG-129	2
23	Extended Roller*	FG-08-08	1
24	Film Roller*	FG-03-03	1
25	Film Lift Body*	FG-08T-00	1
26	Dancer Bar Spring	FJ-01-162	1
27	Micro-Active Switch	Z-15GQ22-B	1
28	Standard Photo Eye Assembly	205234	1
29	Connection Block	FG-08-20	2
30	Bottom Protection Plate	FG-08T-16	1
31	Swing Shaft (DANCER BAR)	FG-142	1

5.5 Illustration

Non Pre-Stretch Carriage

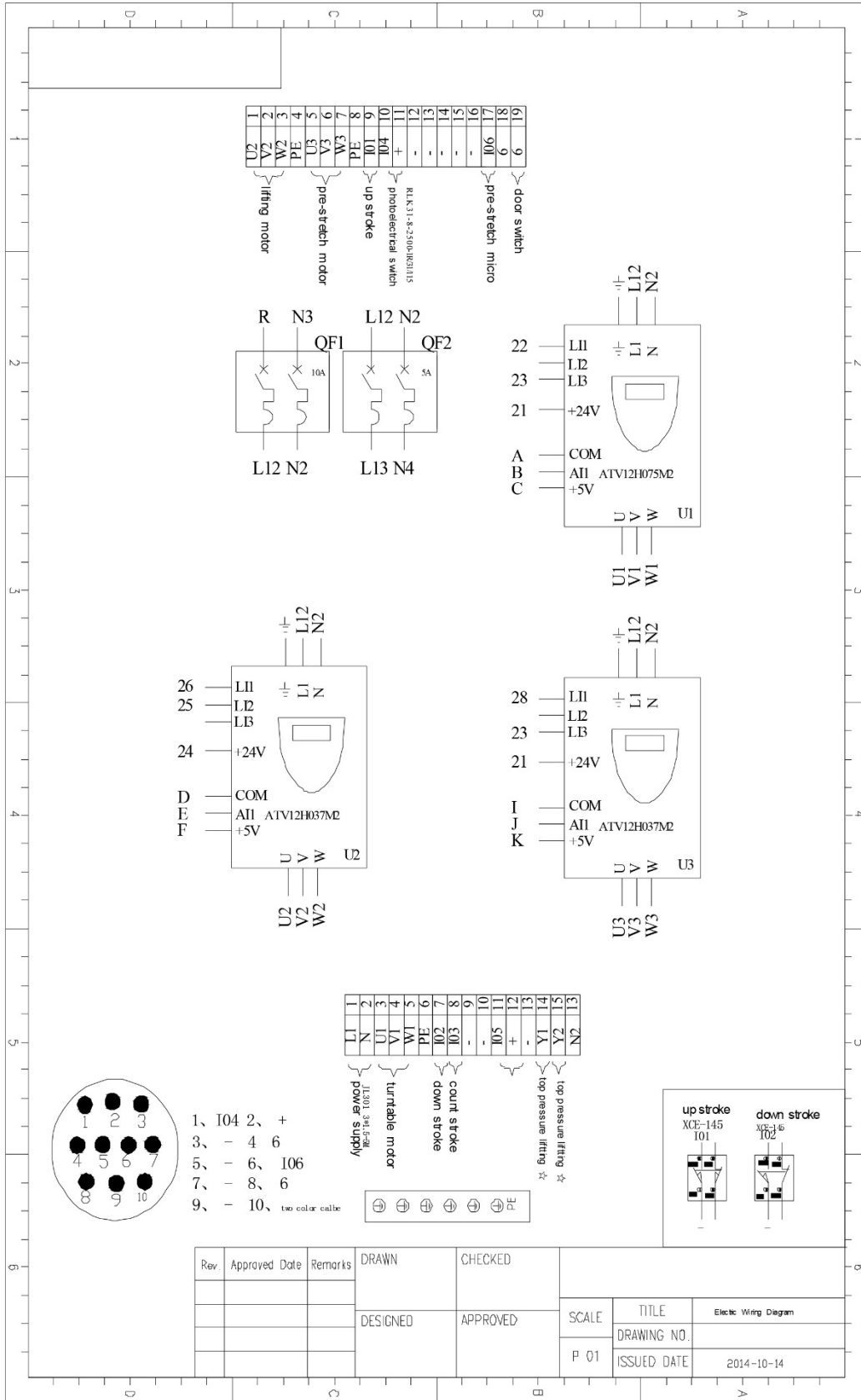


5.5 Illustration

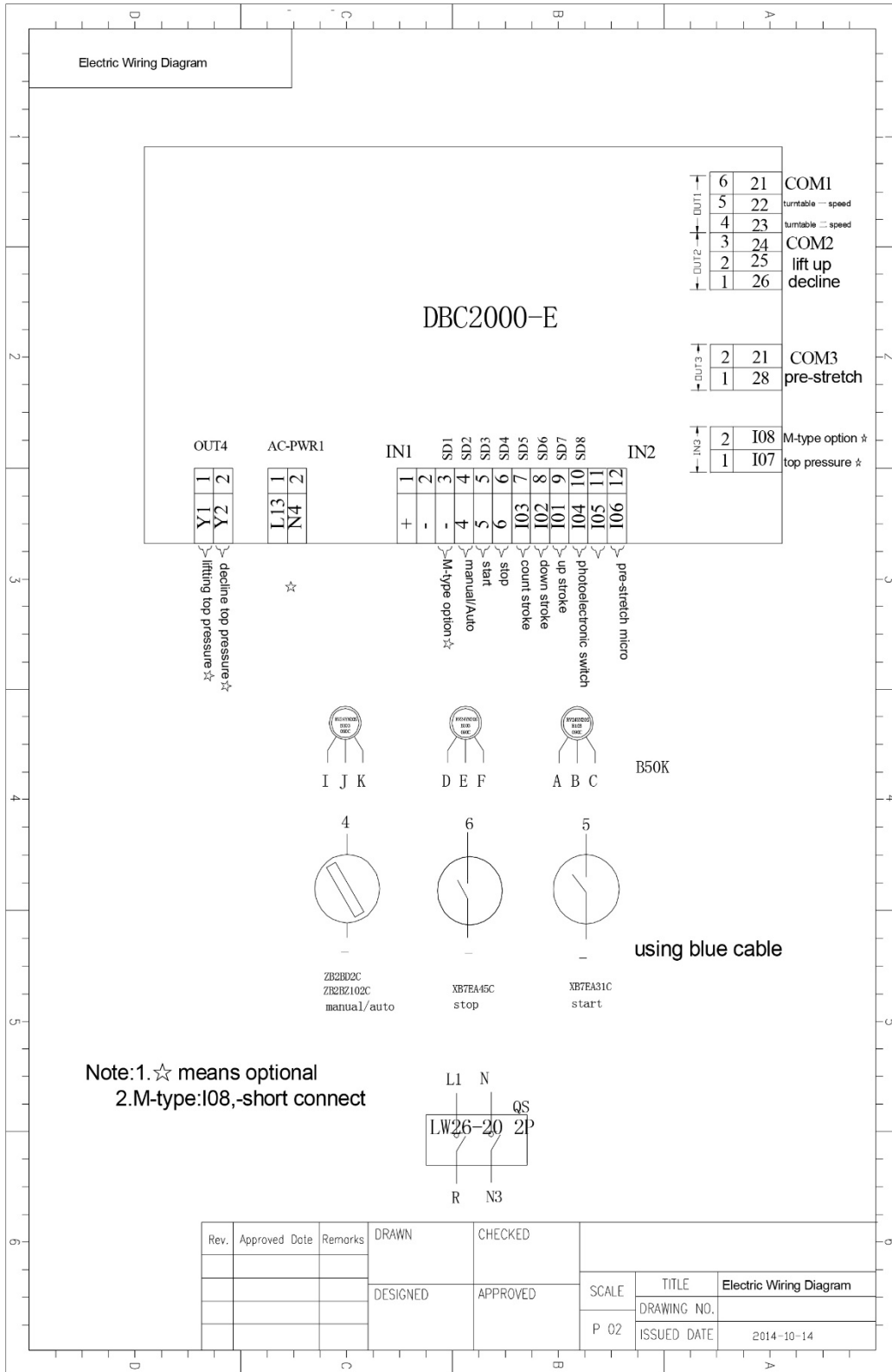
Non Pre-Stretch Carriage (continued)

	Name	Part Number	Qty
1	Hand Shank	FG-164A	1
2	Eccentric Gear	FG-163	1
3	Indicator Block	FG-167	1
4	Tension Block	FG-161	1
5	Tensioning Block Shaft	FG-162	1
6	Adjustment Shank	FG-158	1
7	Bracket	FG-159	1
8	Knob	FJG-1A-197	1
9	Retaining Ring	FG-038A	1
10	Film Orientation Plate	FG-03A-20	2
11	Film Rod	FG-03A-16	1
12	Roller Assembly	FG-153IIA	1
13	Pre-Stretch Shaft	FG-152	1
14	Metal Spacer	FG-2526	1
15	Roller Shaft	FG-154II	1
16	Detent Ring	FG-155	2
17	Non Pre-Stretch Shroud	FG-157	1
18	Eccentric Gear Frame Bracket	FG-165A	1
19	Fine Adjustment Block	FG-168	1
20	Top Shaft Base	FG-156	1
21	Bearing	16007	2
22	Top Cover	FG-151	1
23	Spring	FG-160	1
24	Belt	M-L105	1
25	Non Pre-Stretch Belt Steel Ring	FG-239	1
26	Lift Body	FG-150	1
27	Bearing	61904	2
28	Protective Frame	FG-170A	1
29	Protective Frame Shaft	FG-141	1
30	Internal Thread Ball	M8	1
31	Micro Switch Frame	1060.180.1.PL	1
32	Micro Switch	MQS-216	1

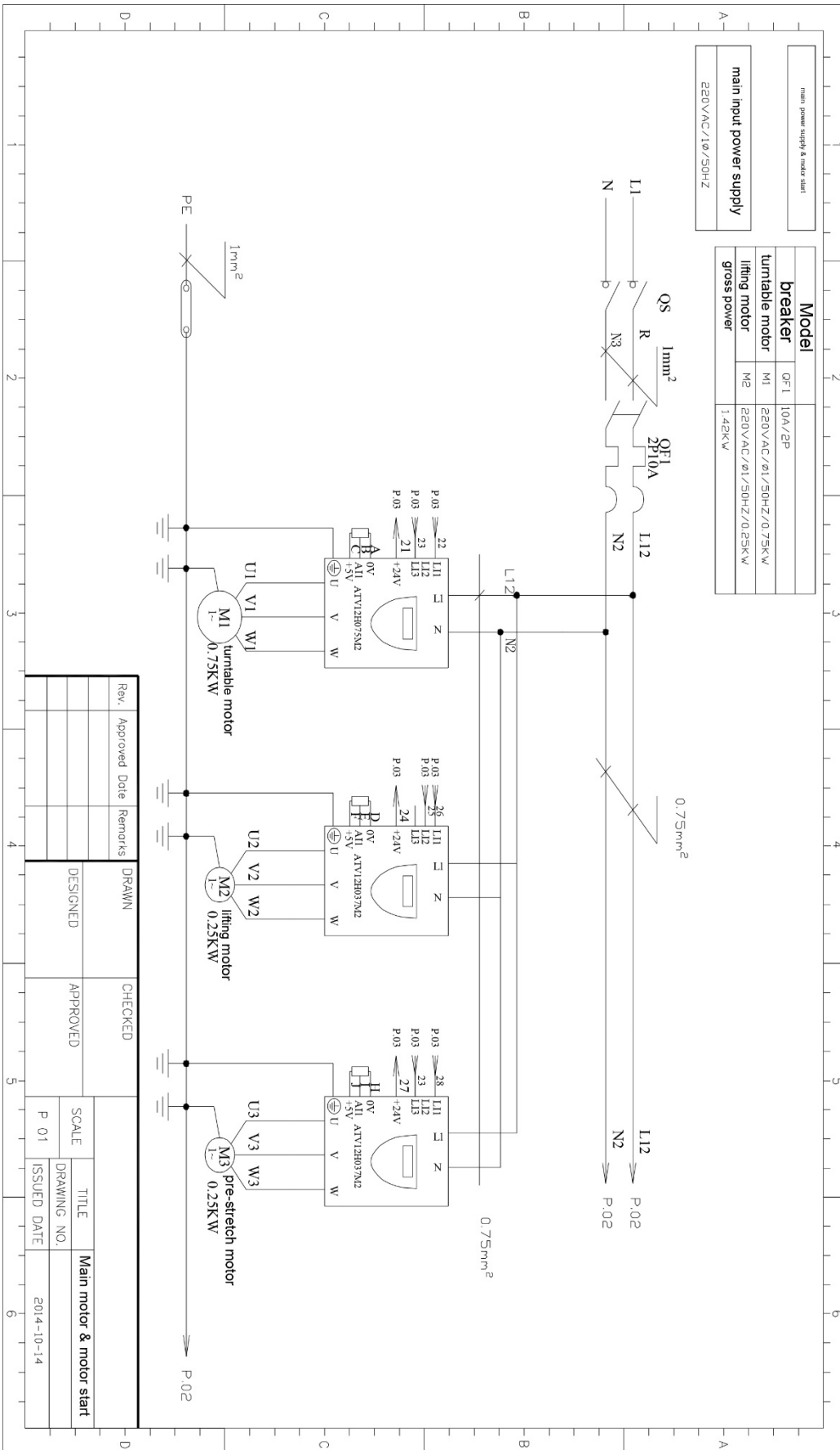
6. Electrical Schematics



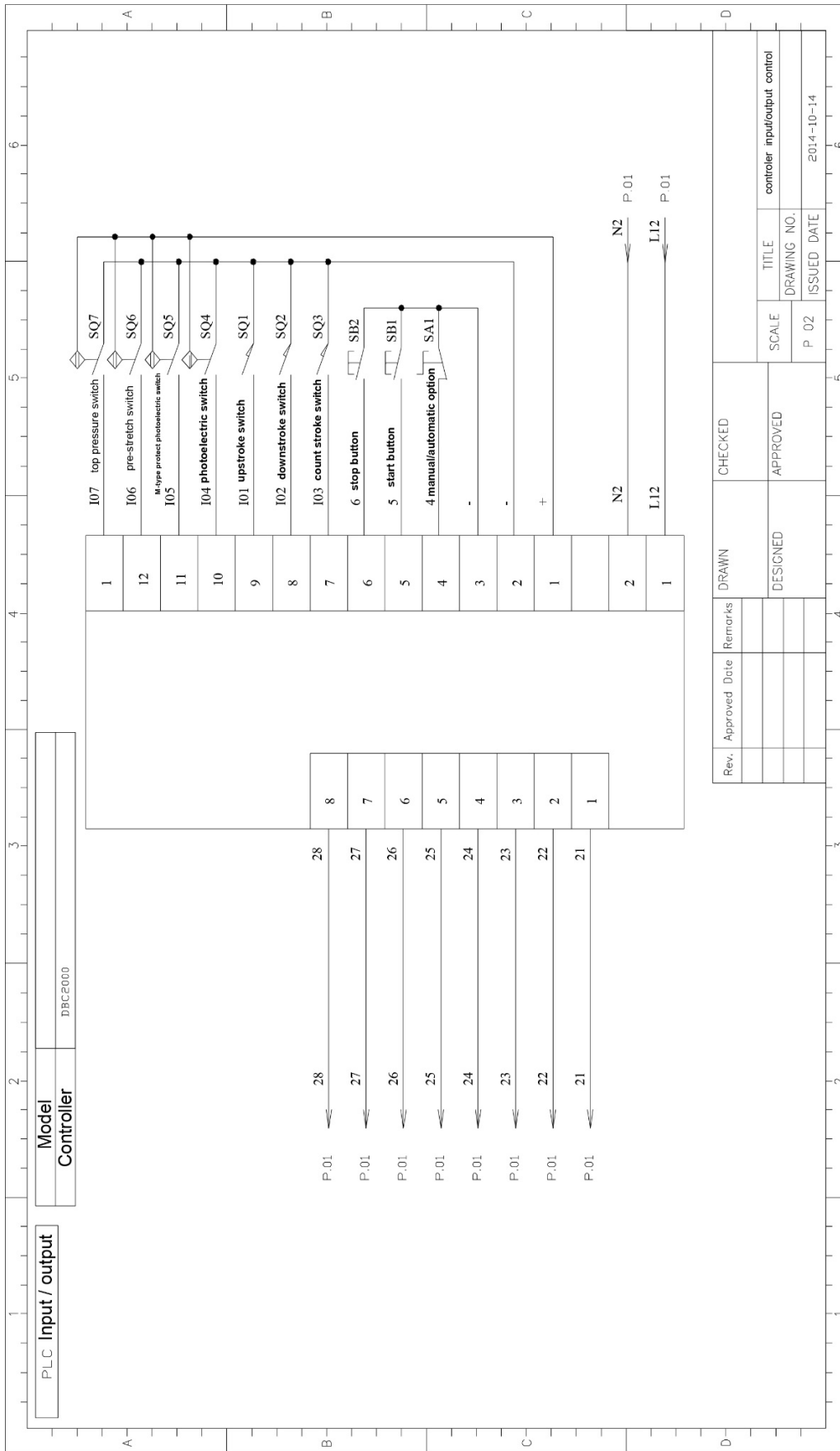
6. Electrical Schematics



6. Electrical Schematics



6. Electrical Schematics



7. Control Panel LEDs / Default DIP Switch Positions

