



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



DO NOT MODIFY OR REMOVE WARNING LABELS



Turntable Edge (x2)



Use Caution When Stepping or Walking

Platform

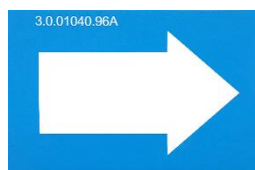


Table Rotation Direction

Platform



Do Not Step

(Turntable may move)

1.1 Safety & Warnings



DO NOT MODIFY OR REMOVE WARNING LABELS



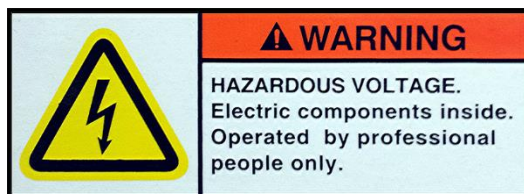
Film Carriage



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

Power Supply	110VAC, 60Hz
Turntable Speed	0-10 RPM
Turntable Diameter	59"
Turntable Diagonal	80"
Turntable Height	3.125"
Pre-Stretch Motor	n/a
Pre-Stretch Gear Ratio	n/a
Pre-Stretch Chain	n/a
Film Stretch	Manually Adjustable on Carriage
Max Film Height	87"
Mast Height	94"
Max Turntable Weight Capacity	3,300 lbs
Max Package Height (2" Overlap)	76.75"
Machine Dimensions	80.7" x 65" x 96.85" (L x W x H)
Shipping Weight	1,433 lbs
Attachment	Ramp or Custom Heavy Duty ³
Noise	≤75db
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.

1.2 Specifications - Eagle 1000B

Power Supply	110VAC, 60Hz
Turntable Speed	0-10 RPM
Turntable Diameter	59"
Turntable Diagonal	80"
Turntable Height	3.125"
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 ²
Film Width	20" (standard) or 30" (option)
Max Film Height	87"
Mast Height	94"
Max Turntable Weight Capacity	4,400 lbs
Max Package Height (2" Overlap)	76.75"
Machine Dimensions	80.7" x 65" x 96.85" (L x W x H)
Shipping Weight	1,433 lbs
Attachment	Ramp or Custom Heavy Duty ³
Noise	≤75db
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

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

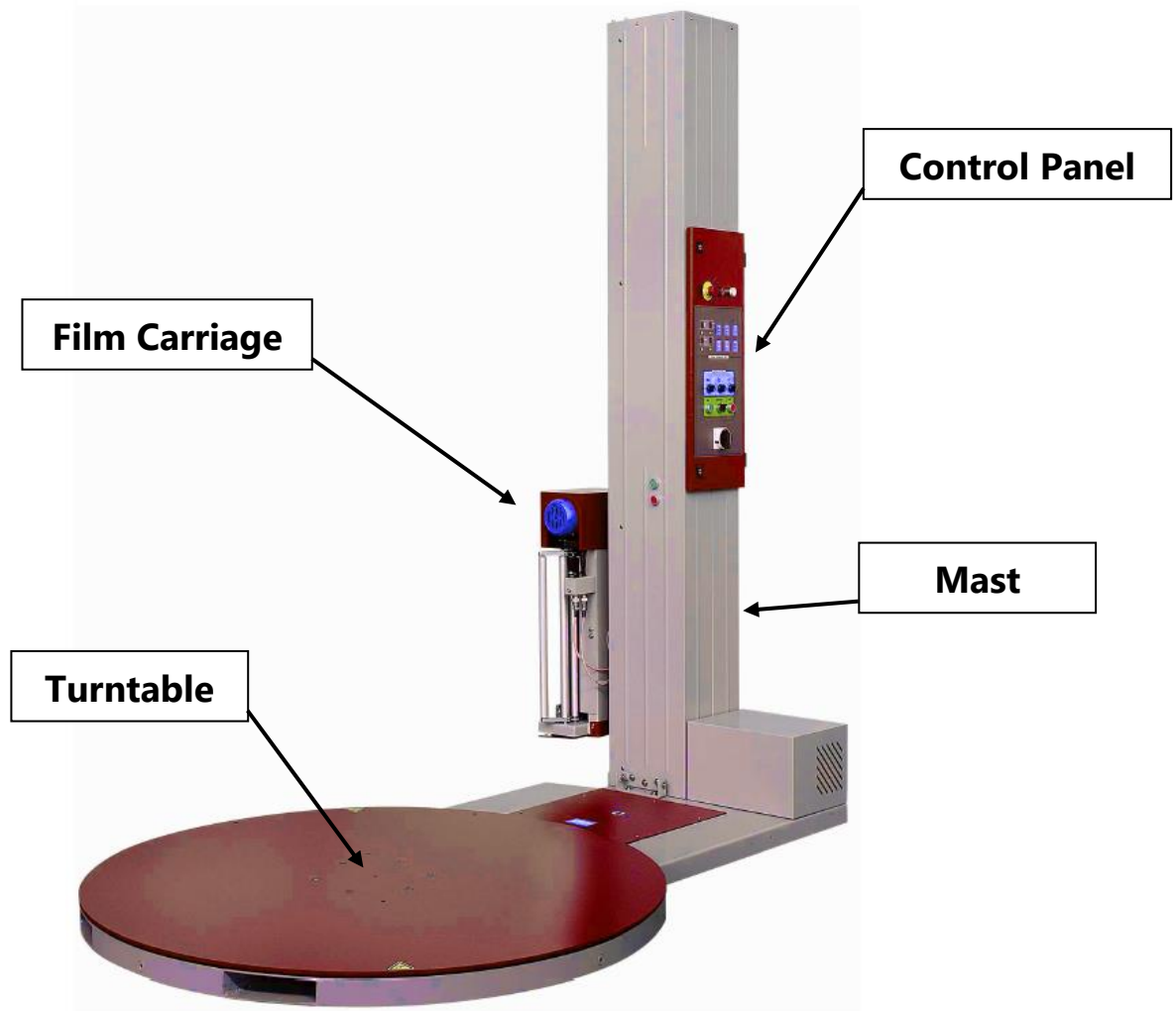
1.5 Safety Precautions Prior to Operating Machine

- 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

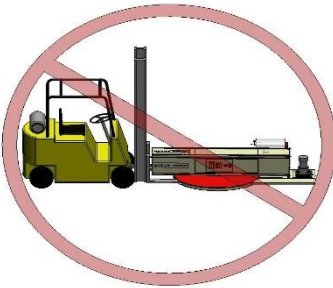


2.2 Transportation

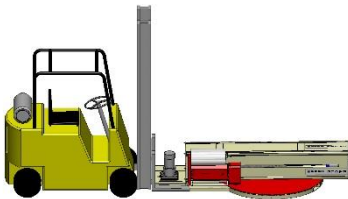
You must have at least 4ft fork tubes or tube extensions fully inserted into the machine and a forklift rated for 3,000lbs to transport the machine safely. Do not raise the load more than 6" off of the ground. (See Fig. 2-2)



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

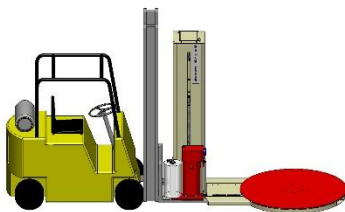


Do not transport machine from turntable when mast is lowered!

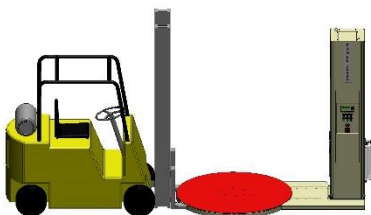


When transporting the machine in this configuration;

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



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)

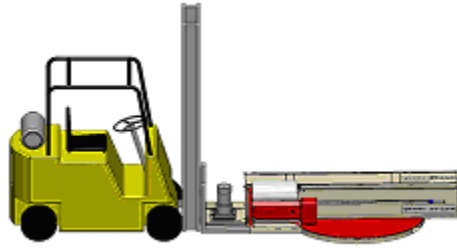


Fig. 2-3

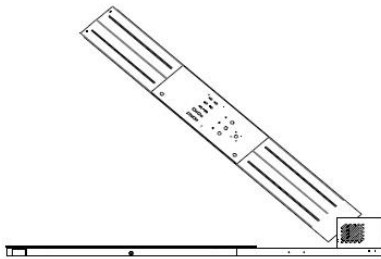


Fig. 2-4a



Fig. 2-4b

Step 2 – 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 3 - 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)

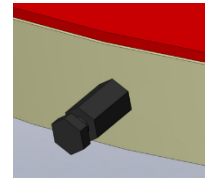


Fig. 2-5

Step 4a (*Eagle 1000B*) - 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)

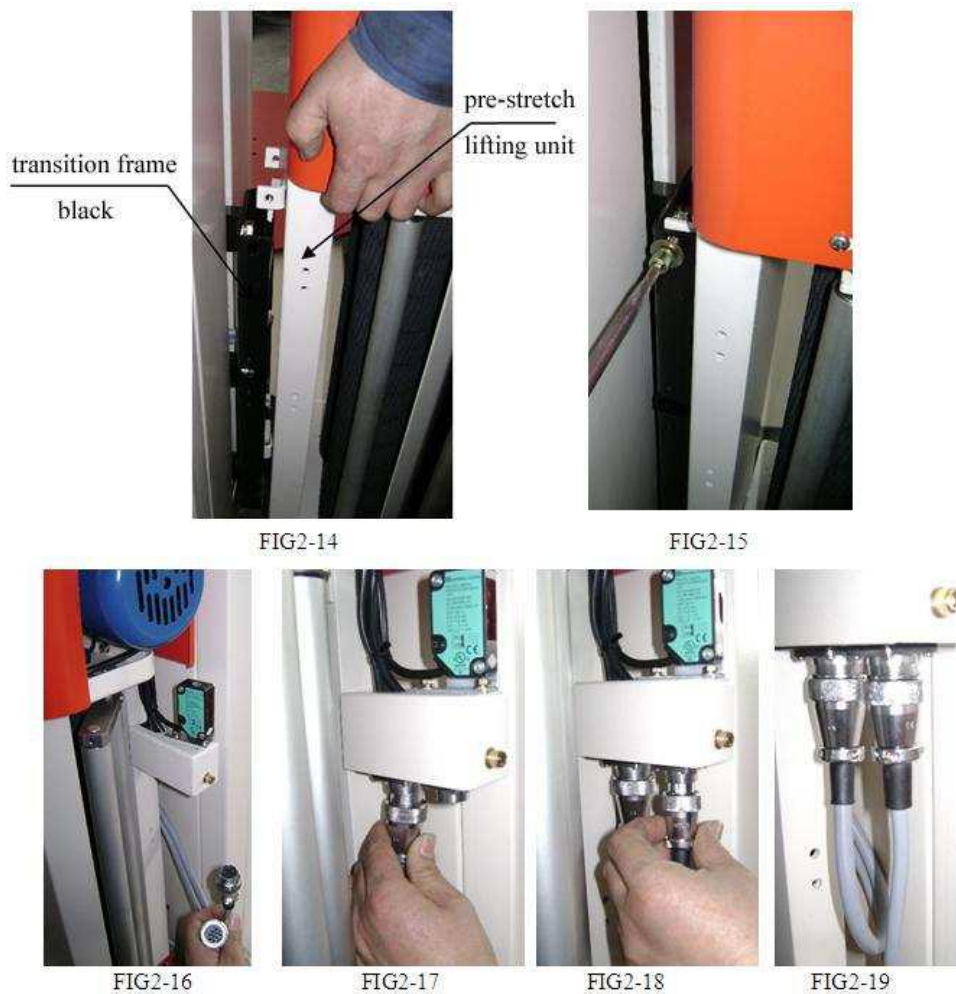


Fig. 2-6

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)

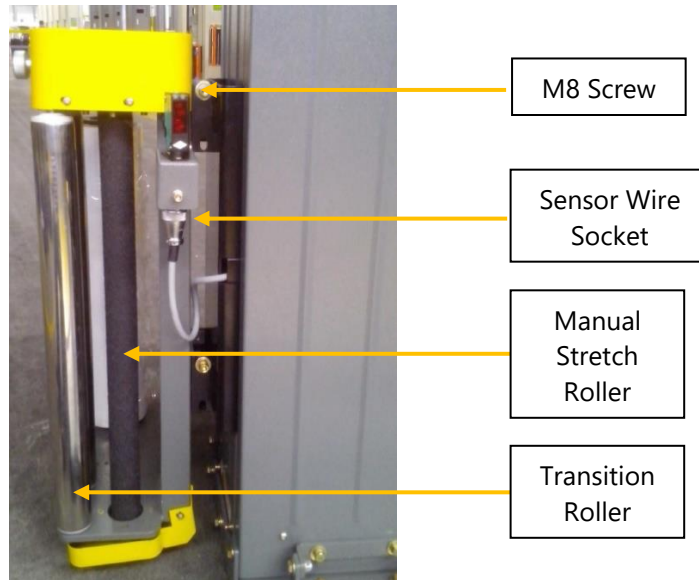


Fig. 2-7

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 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)

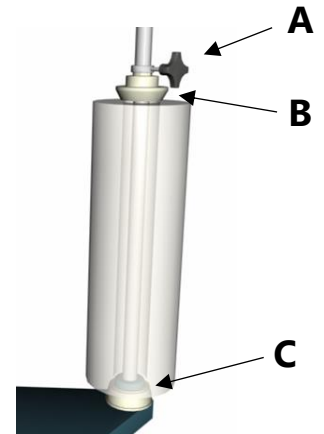


Fig. 3-1



Fig. 3-2

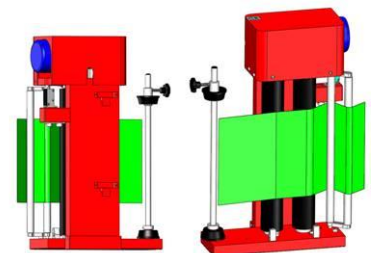


Fig. 3-3

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 fastening screw "A". (See Fig. 3-4)
- Step 4** - Turn tensioning handle (1) then adjust film tension amount by using knob (2). (See Fig. 3-5 and Fig. 3-6)

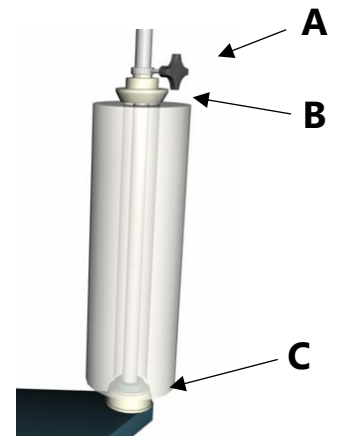


Fig. 3-4



Fig. 3-5

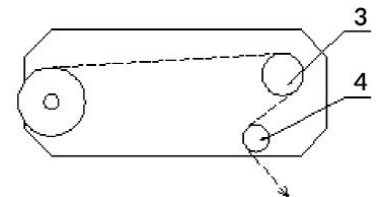
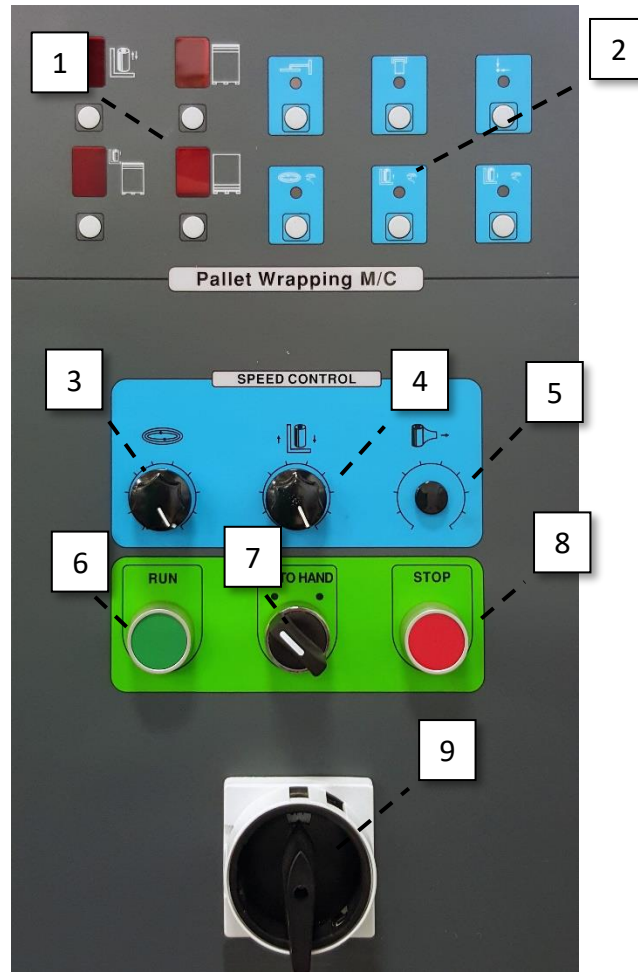


Fig. 3-6

3.2 Basic Machine Operation

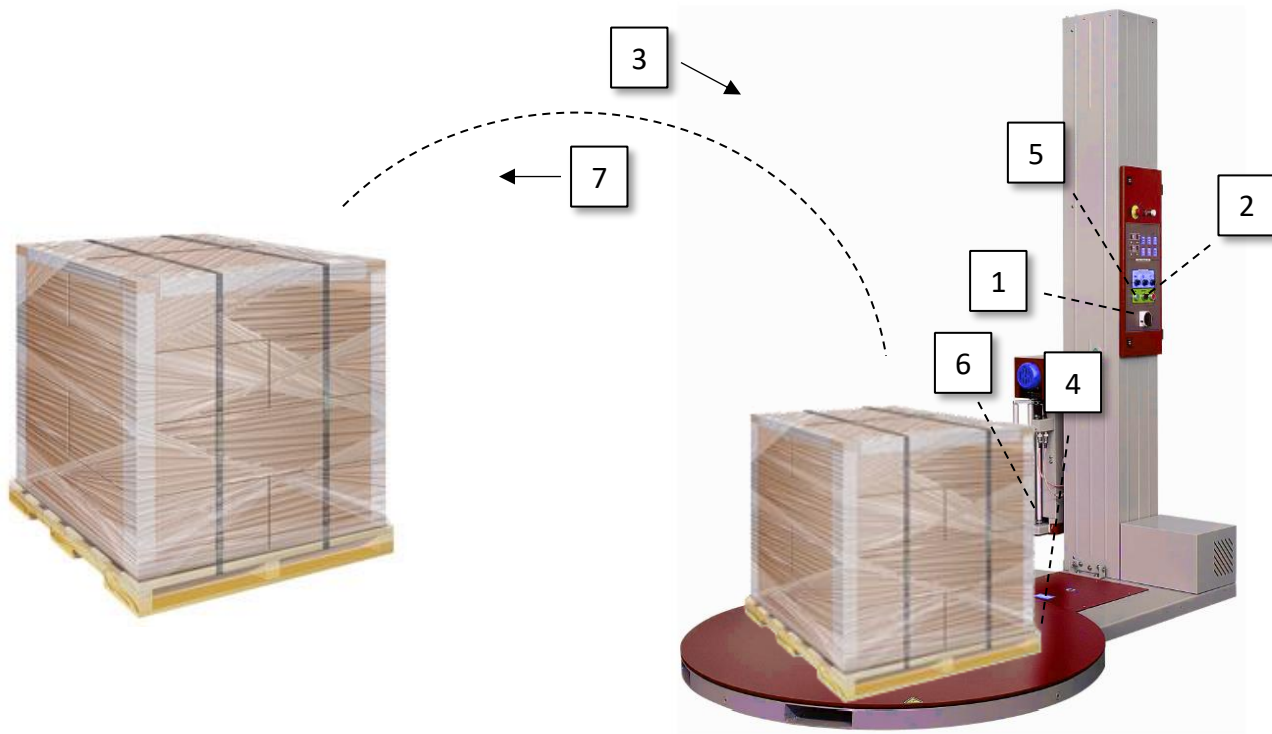


1. Counts/Timer Value Display	6. Start Button
2. Machine Functions	7. Automatic / Manual Mode Switch
3. Turntable Speed	8. Machine Stop Button
4. Carriage Speed	9. Power Switch
5. Film Tension (if applicable)	

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.

3.2 Basic Machine Operation



Step 1 – Turn on the power to the machine.

Step 2 – Using the Auto/Hand switch, select a job mode.

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.

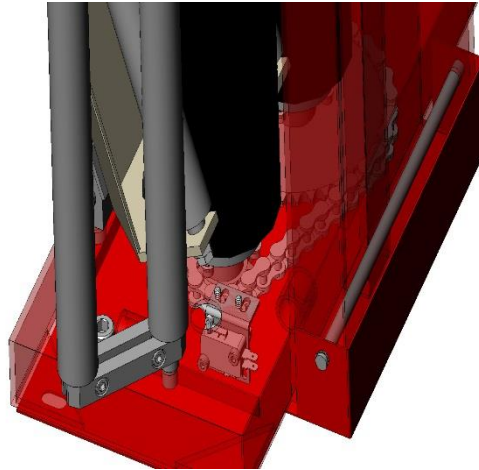
Step 6 – Once the job finishes, split the film between the stretch wrapper and the now wrapped load and secure any loose ends of film.

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

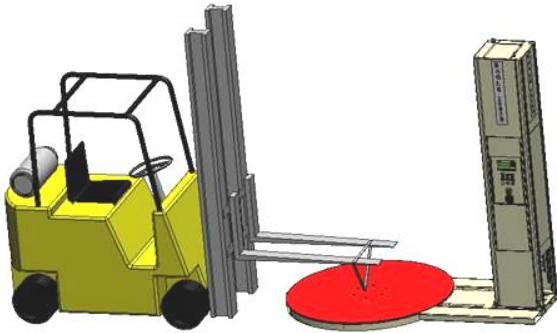


Fig. 4-1



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

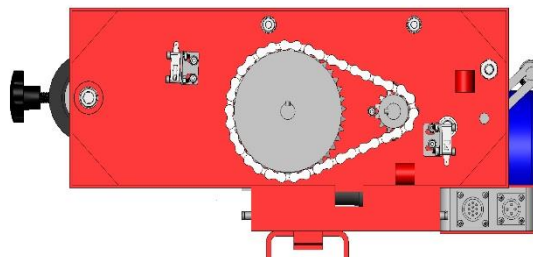


Fig. 4-3

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

4.3 Turntable Idler Wheels

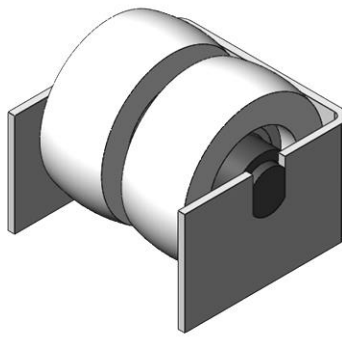


Fig. 4-4

- 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 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.

4.5 Replacement Parts

Components to be replaced by the operator.

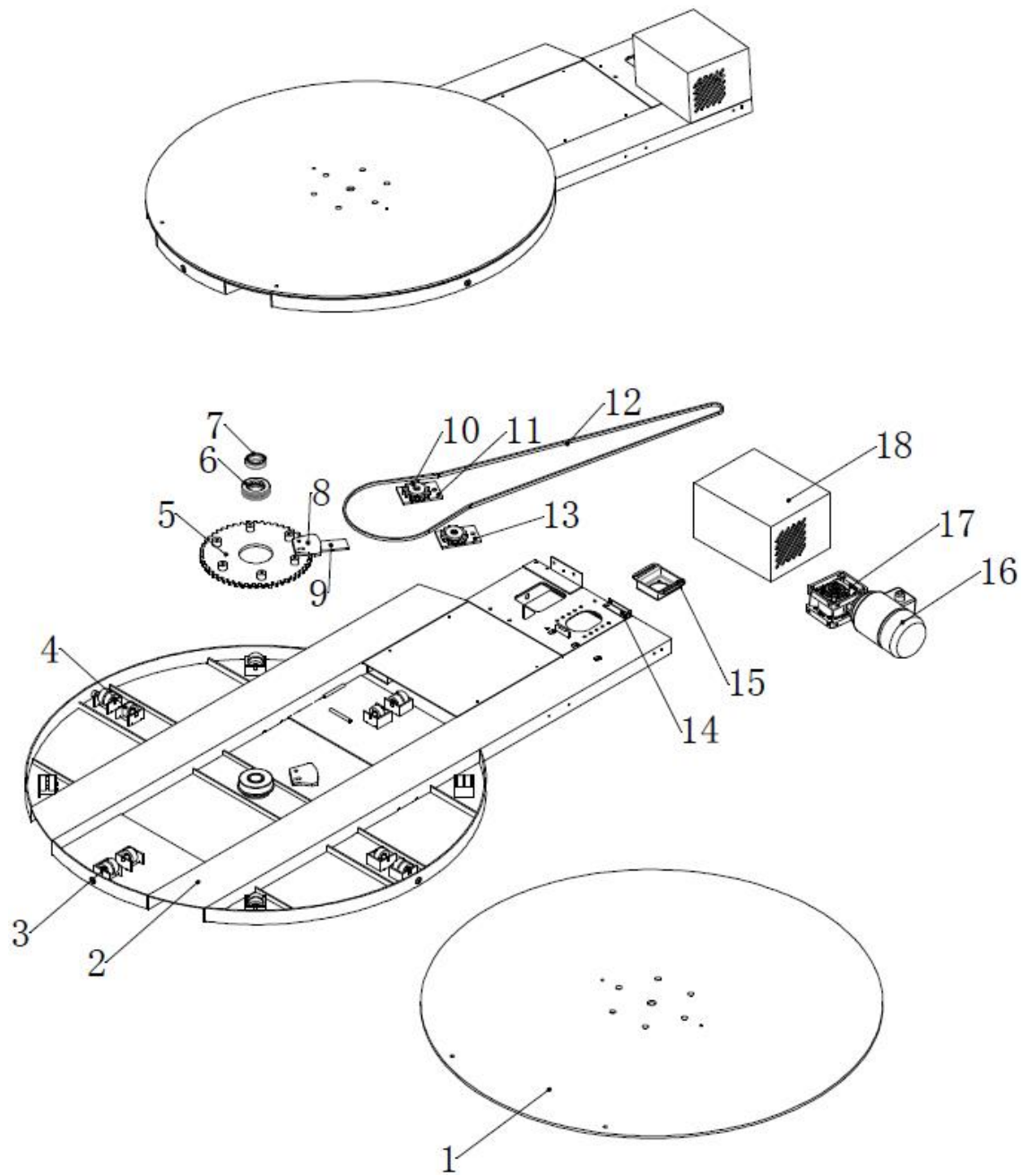
	Name	Part Number
1	Positioning plate	FG-135A
2	String ring	FG-138A
3	Micro switch (Eagle 1000B)	-
4	Tension spring (Eagle 1000B)	01-162
5	Belt (Eagle 1000A)	M-L105
6	Idler wheel	FG-013A

Components that must be replaced by a professional.

	Name	Part Number
1	Bearing (Eagle 1000A)	6007
2	Bearing (Eagle 1000B)	6901
3	Bearing	6202
4	Chain	-
5	Piezoresistor	-

5.1 Illustration

Base



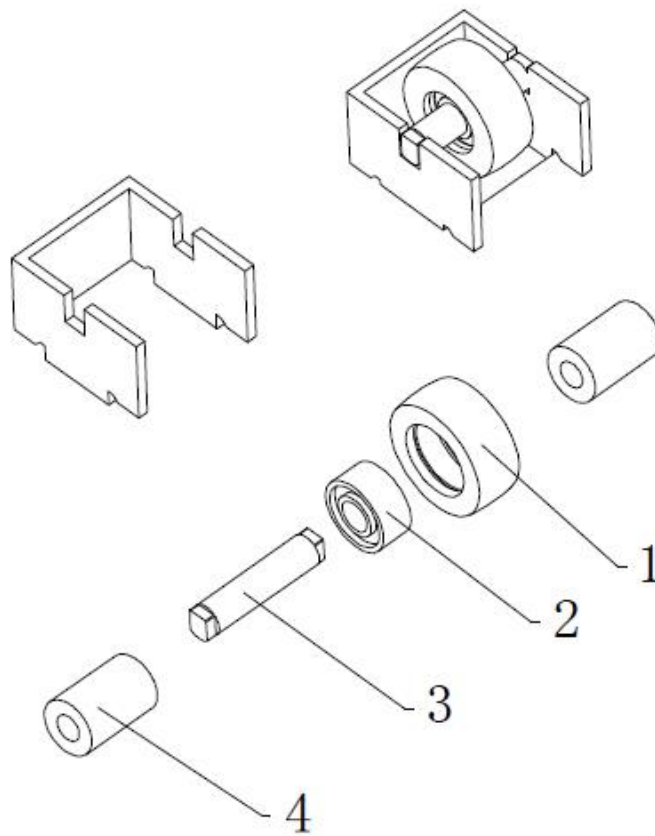
5.1 Illustration

Base (continued)

	Name	Part Number	Qty
1	Turntable	FG-023	1
2	Pedestal	FG-7000AG	1
3	Roller Wheel Assembly (1)	-	4
4	Roller Wheel Assembly (2)	-	8
5	Large Chain Wheel	FG-008	1
6	Bearing	51213	
7	Bearing	6009	
8	Travel Switch Module (1)	FG-009	1
9	Count Travel Switch	TZ-918	1
10	Tension Chain Wheel	FG-021	2
11	Tension Wheel Seat	FG-011	1
12	Chain	12A	1
13	Elastic and Tension Wheel Seat	FG-012	1
14	Motor Cover Fix Part (2)	FG-376B	1
15	Motor Base	1010.80.10.PL	1
16	Motor	YS7124/B14	1
17	Reducer	NMRV050	1
18	Motor Covering Plate	FG-374B	1

5.2 Illustration

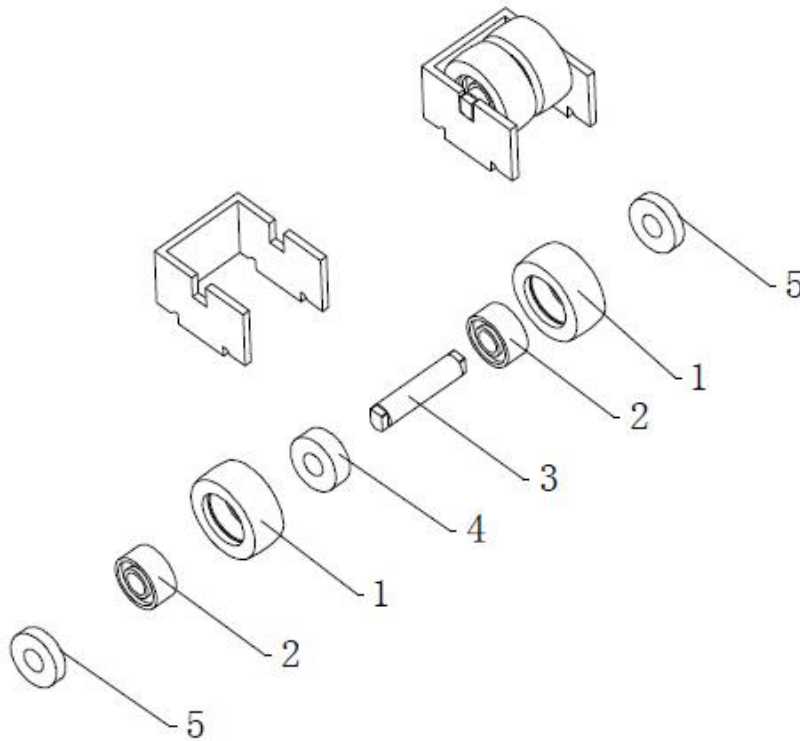
Roller Wheel Assembly (1)



	Name	Part Number	Qty
1	Roller Wheel Body	FG-013A	1
2	Bearing	6202	1
3	Roller Wheel Bearing	FG-014A	1
4	Spacer Ring	FG-015A L=23	2

5.3 Illustration

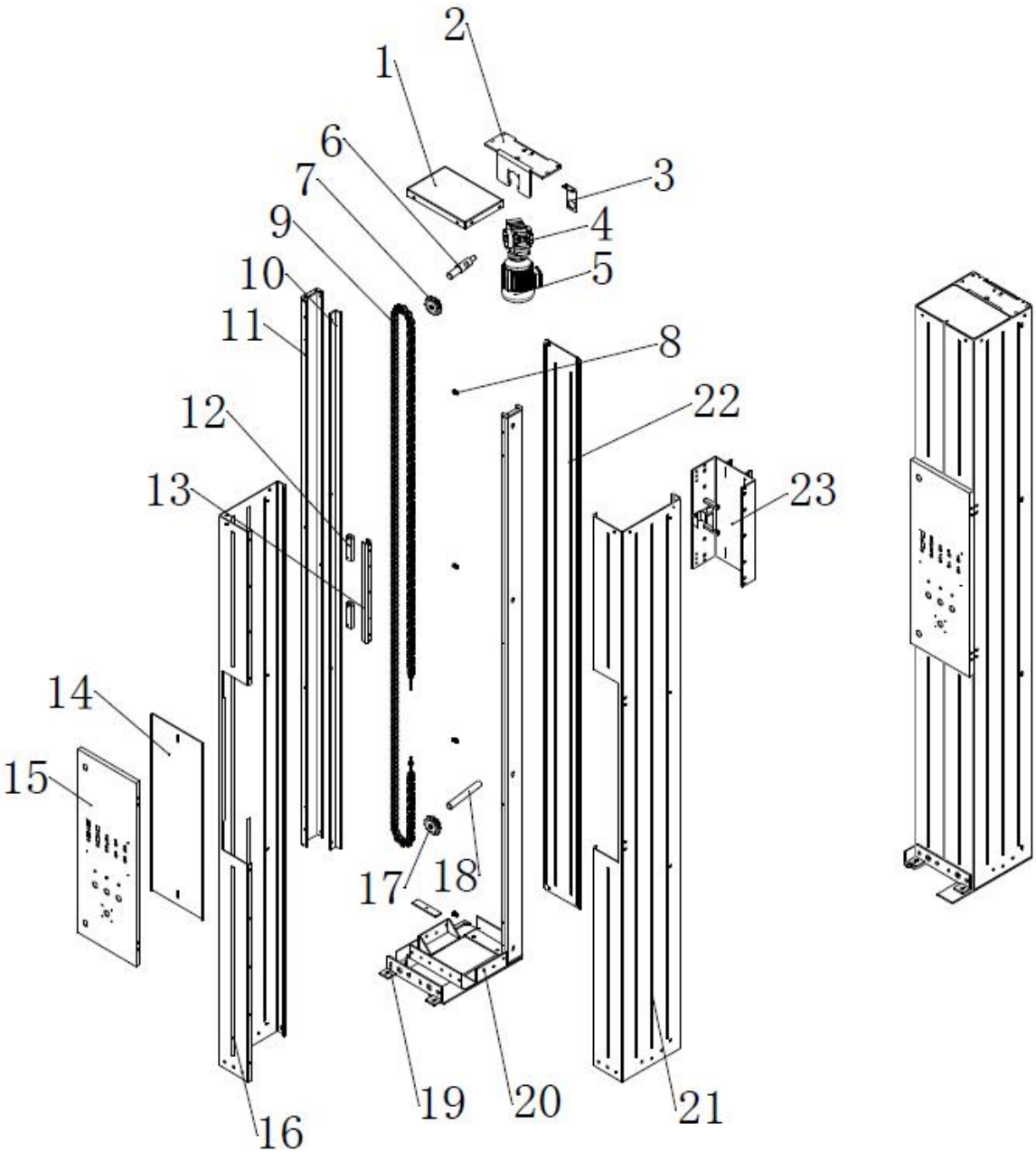
Roller Wheel Assembly (2)



	Name	Part Number	Qty
1	Roller Wheel Body	FG-013A	2
2	Bearing	6202	2
3	Roller Wheel Bearing	FG-014A	1
4	Spacer Ring	FG-015A L=16	1
5	Spacer Ring	FG-015A L=9.5	2

5.4 Illustration

Mast



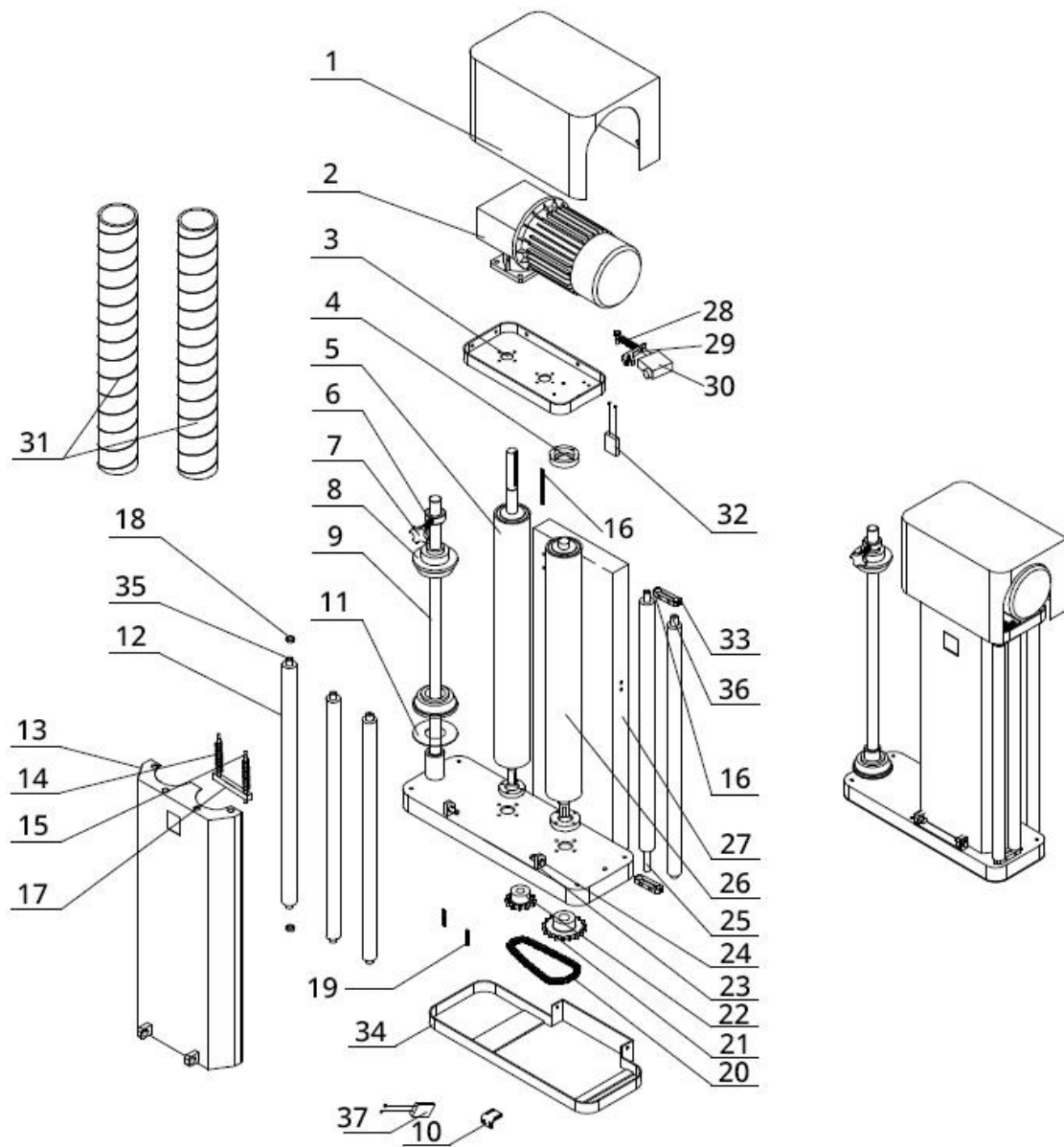
5.4 Illustration

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	Carriage Motor	YS6334/B14	1
5	Reducer	NMRV040/60-	1
6	Motor Shaft	FG-390B	1
7	Drive Sprocket	FG-060	1
8	Carriage Bolts	-	-
9	Chain	08B	2
10	Slide Way	FG-393B	2
11	Support Iron Box	FG-392B	2
12	Sliding Block	-	4
13	Sliding Block Base	-	2
14	Electric Base Plate	FG-333AGB	1
15	Column Gate	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
23	Lift Frame	FG-370B	1

5.5 Illustration

Pre-Stretch Carriage



5.5 Illustration

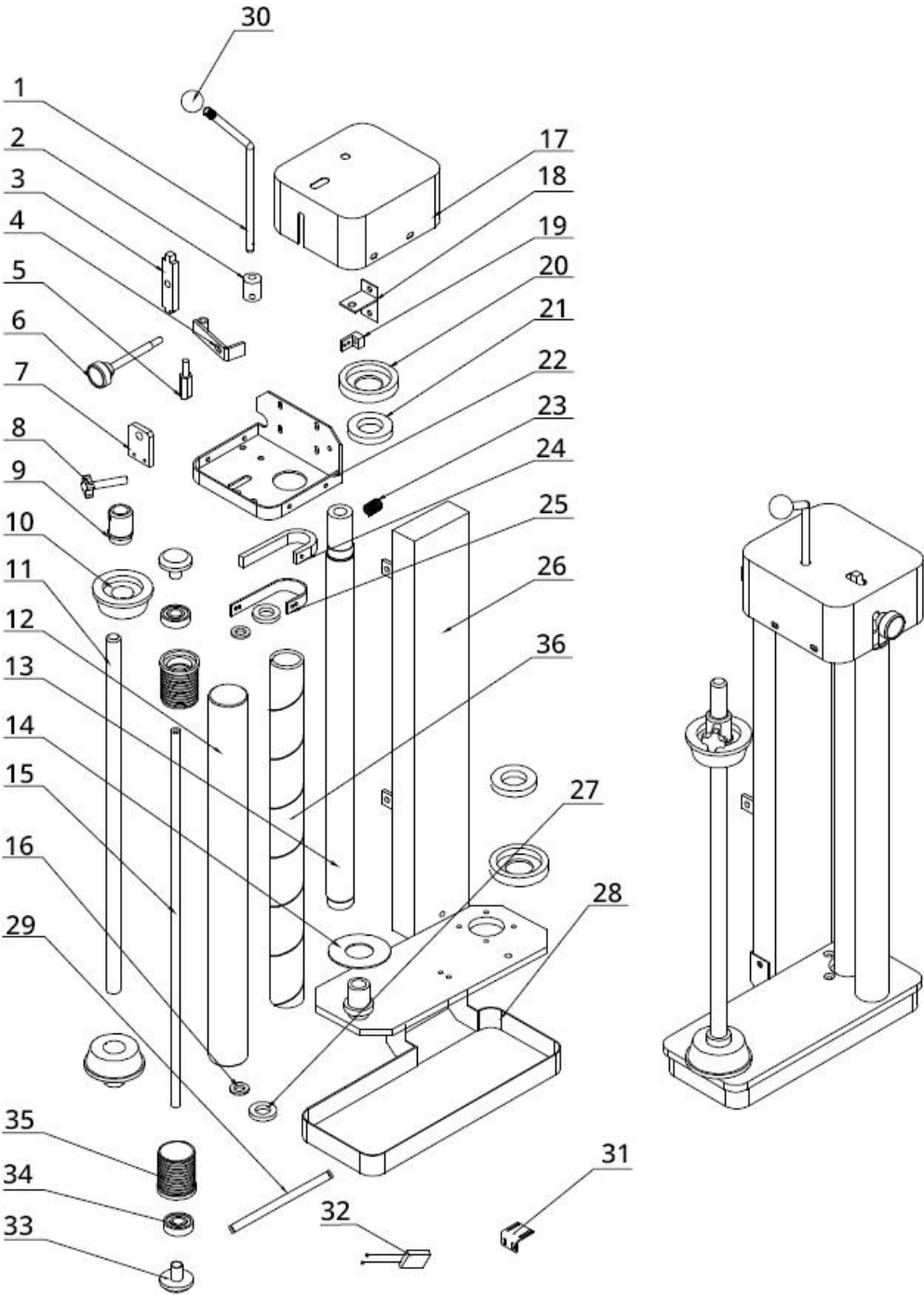
Carriage – Continued from previous page.

	Name	Part Number	Qty
1	Motor Cover	FG-123	1
2	Pre-Stretch Motor	NMRV040/20-YS6334-B14	1
3	Pre-Stretch Motor Base Plate	FG-111C	1
4	Bearing Block	FG-132	3
5	Pre-Stretch Roller	FG-114	1
6	Straining Ring	FG-138A	1
7	Tightening Screw	M10	1
8	Film Positioning Plate	FG-135A	2
9	Film Bearing	FG-134	1
10	Micro Switch Frame	1060.180.1.PL	1
11	Location Pallet	FG-2526	1
12	Transition Roller	FG-115	5
13	Transition Roller Block	FG-112	1
14	Pressure Spring	FG-131	2
15	Locating Pin	FG-126A	2
16	Key 1	6x6x60mm	1
17	Rail	FG-124	1
18	Bearing	6901	10
19	Key 3	5x5x14mm	2
20	Chain	06B	1
21	Drive Chain Wheel	FG-144	1
22	Drive Sprocket	FG-143	1
23	Lower Hinge	FG-128	1
24	Hinge Pin	FG-129	2
25	Hinge Axis	FG-118	1
26	Master Rotor	FG-113	1
27	Lift Body	FG-110A	1
28	Stretch Spring	01-162	1
29	Micro Switch Module	FG-121	1
30	Micro Switch	Z-15GQ22-B	1
31	Asperities	40×δ2×3300mm	2
32	Optoelectric Switch	205234	1
33	Left/Right Link Block	FG-120A	2
34	Protective Frame	FG-140A	1
35	Transition Drum Shaft	FG-116	3

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

5.6 Illustration

Non Pre-Stretch Carriage



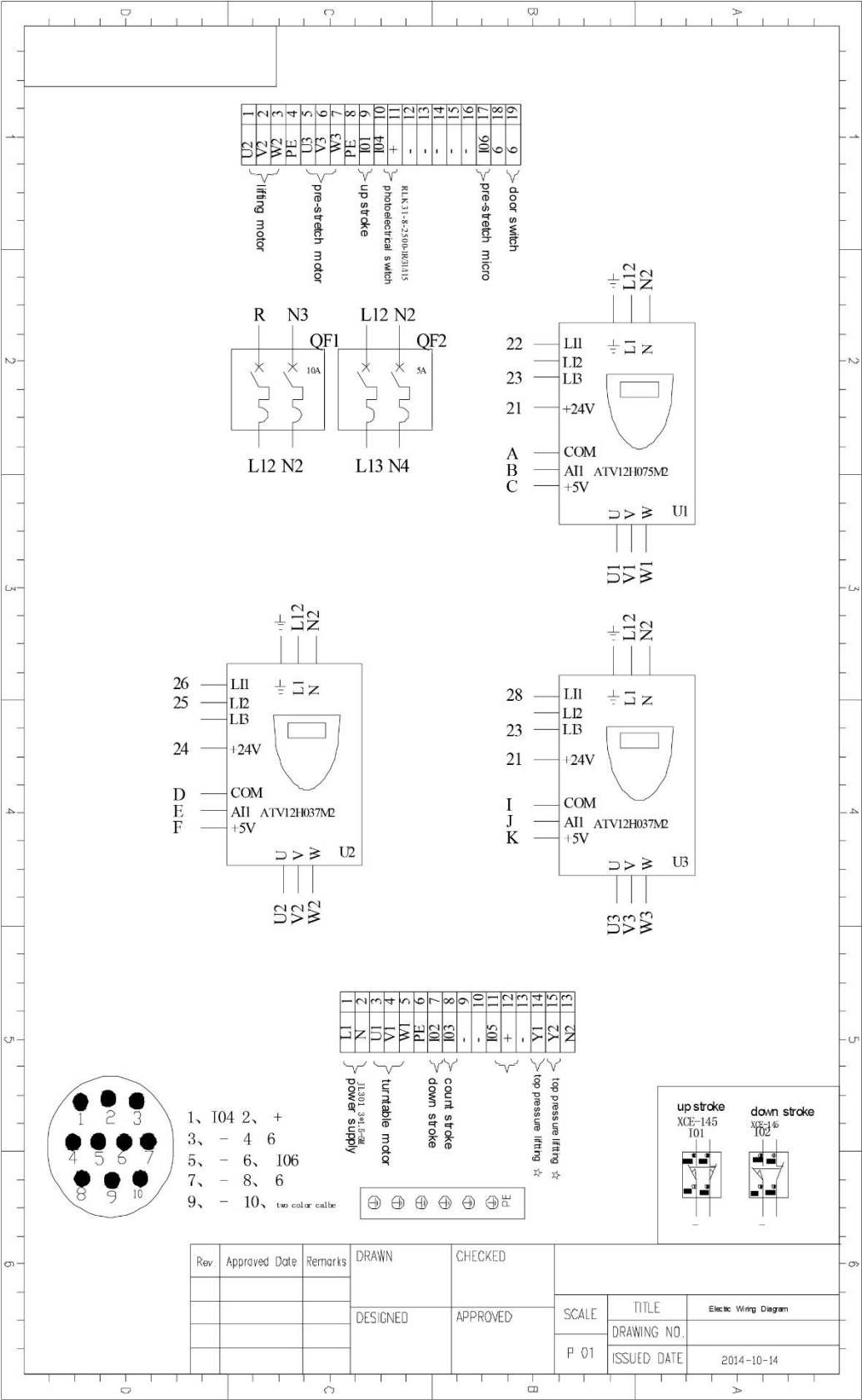
5.6 Illustration

Carriage – Continued from previous page.

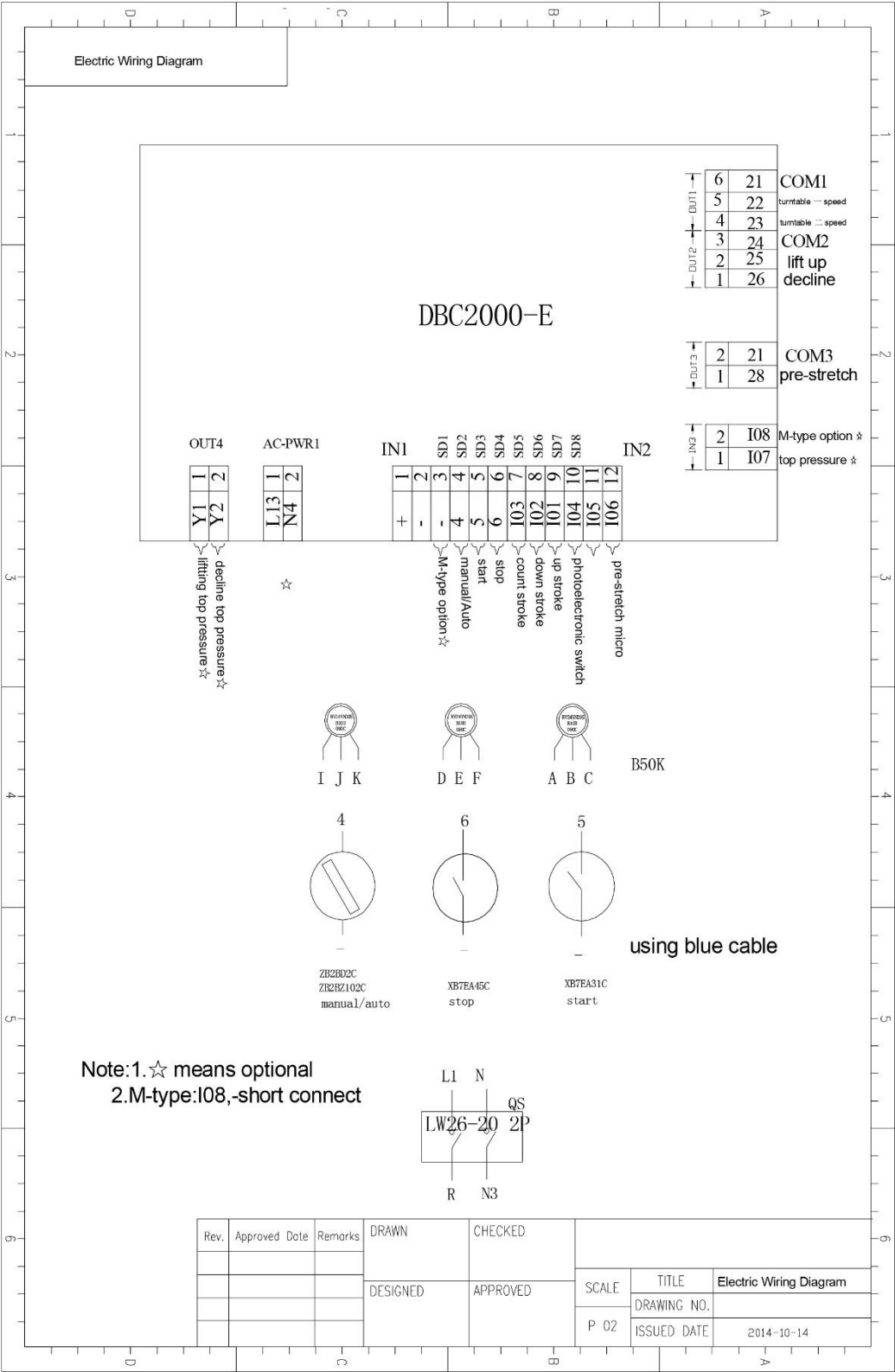
	Name	Part Number	Qty
1	Hand Shank	FG-164A	1
2	Eccentric Gear	FG-163	1
3	Indicator Block	FG-167	1
4	Tension Block	FG-161	1
5	Tensioning Block Shaft	FG-162	1
6	Adjustment Shank	FG-158	1
7	Bracket	FG-159	1
8	Tightening Screw	M10	1
9	Retaining Ring	FG-138A	1
10	Film Locating Plate	FG-135A	2
11	Film Shaft	FG-134	1
12	Roller	FG-153II	1
13	Pre-Stretch Shaft	FG-152	1
14	Positioning Pallet	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
33	Transition Roller Outer End Cap	A50-106.1	2
34	Bearing	6002	2
35	Transition Roller Inner End Cap	A50	2

36	Asperities Belt	40× δ 2×3300mm	1
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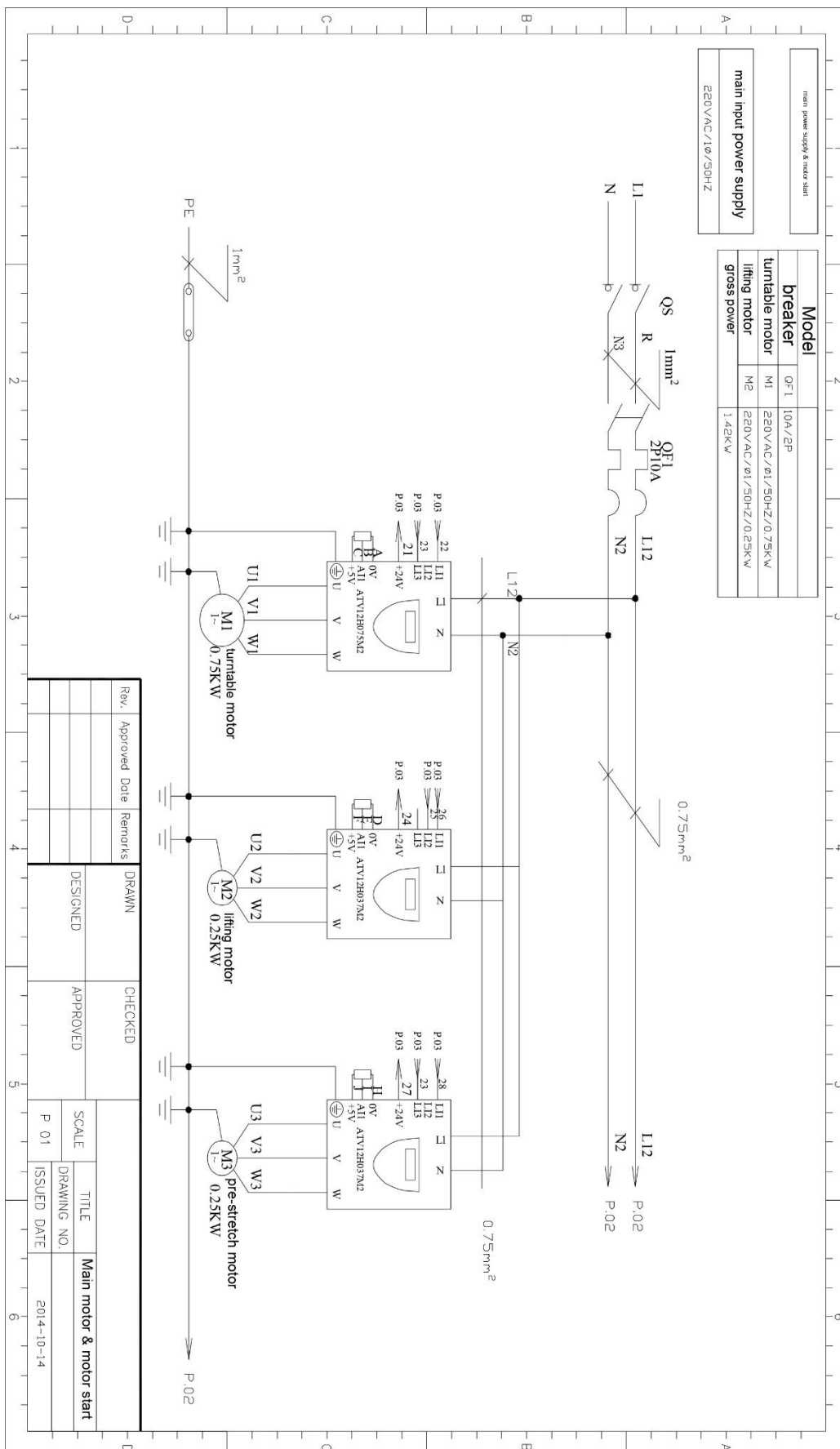
6. Electrical Schematics



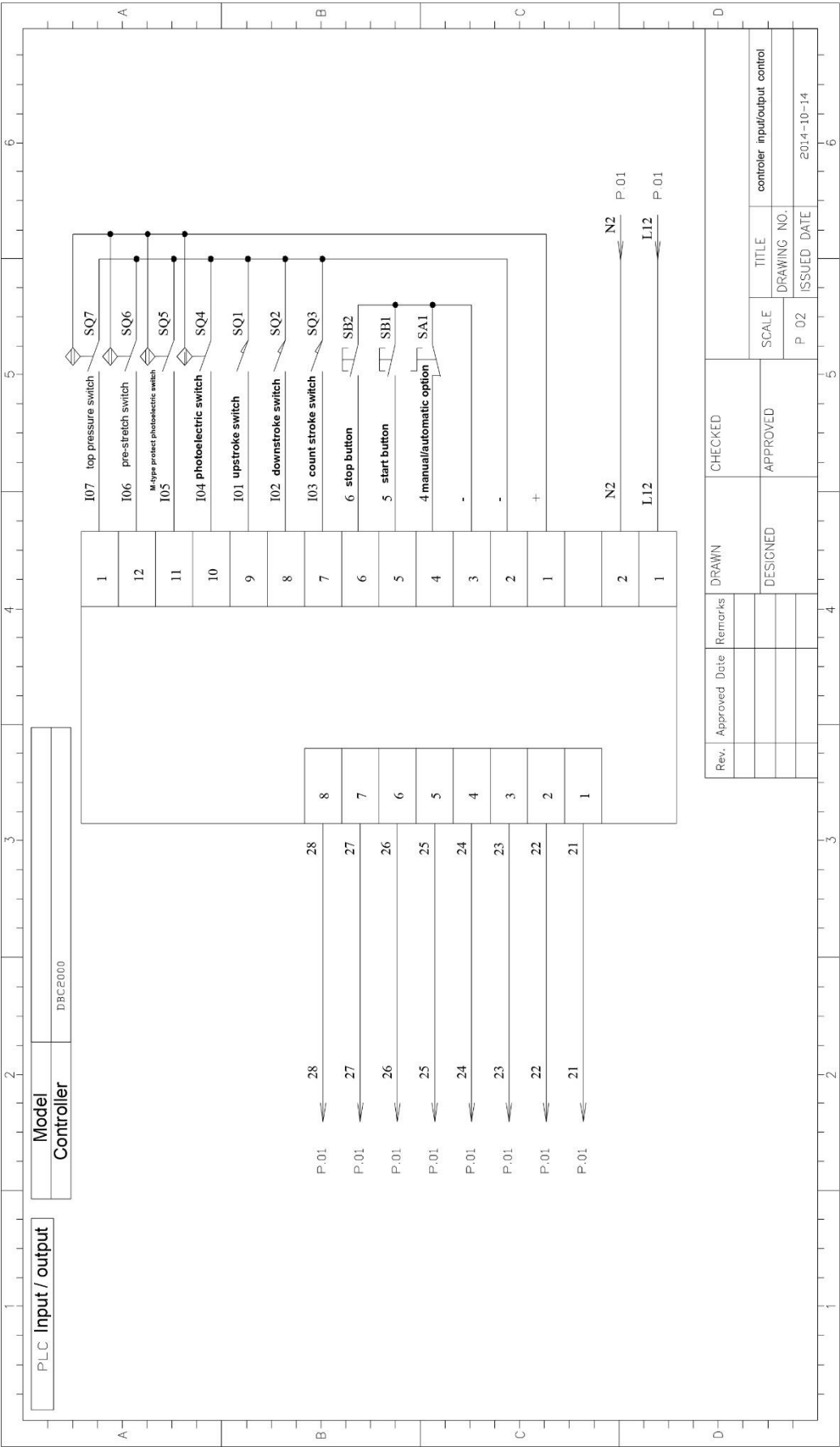
6. Electrical Schematics



6. Electrical Schematics



6. Electrical Schematics



7. Control Panel LEDs

