



OPERATION MANUAL

High Speed Flute Laminator
Model: **DX-2100**



REV 05/22

Serial: **DX0381X**

US

English



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Chapter 1: SAFETY

This document is aimed for the people, who, for different reasons, directly or indirectly are responsible of the machine handling. The people who interact with the machine, have different levels of training and expertise. In that way, in order to ensure a high level of security, it's necessary that the people that directly interact with the machine, are well trained and with experience.

The customer has to make sure that the operator is adequately qualified and trained for the tasks he performs. This manual is intended for anyone who is involved in the use of the machine. As far as general safety standards are concerned, this document is aimed to the machine operator and the user, who are the most prone to accidents, as well as the people who interact directly with the machine.

A) General

1. Users are recommended to carefully read this manual and follow general instructions.
2. This document is a tool necessary for the previous understanding of the **High Speed Flute Laminator DX-2100** that is going to be used.
3. Its reading and understanding are mandatory before using the machine, as it is necessary to know all its operation, maintenance and safety aspects.
4. Correct operation shall be determined by its appropriate installation and use.
5. Any modification carried out on this mechanical or electrical parts can compromise the safety parameters arranged by **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** declines all responsibilities as accidents or damages caused by safety systems tampering attempts concerns.
6. It is recommended to use only replacement parts recommended by the manufacturer. In case of detecting any shortcoming, the manufacturer must be informed to solve it.
7. Repair of this machine as well as its periodical maintenance, should be performed by qualified professionals.
8. Before commissioning, cleaning or making any adjustments in the machine, be sure all moving parts are in standby.
9. In case of detecting any deficiency, the manufacturer must be informed in order to solve it.
10. Necessary information shall be provided to workers using the machine, as well as a specific training for its use.
11. This instruction manual shall be made available imperatively to the workers.
12. Appropriate individual protective equipment's recommended by the manufacturer shall be provided to each worker. A documental record of maintenance, revisions and malfunctions of the machine shall be carried out.

B) Safety Warning Labels

It is important to know that in this document **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** gathers all the information necessary to use the machine in safety conditions, it cannot however obviate them in the whole.

As a complete and capillary test on every machine always shows residual dangers, that is to say those dangers that can not be avoided or sufficiently reduced through planning and against which protections are not completely effective, **the operator must take the safety warning labels applied on the machine and the following advices into serious considerations:**

1. The Operators must memorize the exact position of control devices able to stop the machine in case of emergency.
2. The Operators must control their workmates in case they are operating in dangerous area.
3. It is forbidden to perform maintenance works on the machine before interrupting voltage, or before the starting up device of the part to be inspected or on which maintenance has to be carried out is deactivated.
4. Each foreign object placed on parts in movement such as keys, screw drivers, bolts must be removed before machine is started up.
5. The machine working signaling must be kept cleaned and easily legible, in particular the warning one.
6. It is recommended not to remove barriers and protection devices restricting the access to the machine components.
7. Periodically check the efficiency of safety device in order to keep them reliable in case of necessity.
8. Do not use the machine until all security devices have been restored.
9. Guards and panels opened or removed in order to carry out repairs must be always closed and replaced.
10. It is forbidden to execute repairs or adjusting operations on operation parts. Whenever it is necessary to perform such operations, safety precautions must be adopted in order to protect workers.
11. When an emergency occurs, press the "emergency stop switch" to cut off electrical power boxes and stop the machine action.
12. Wear proper work clothing, protective helmets, gloves.
13. Wear rubber shoes to avoid electrical shock.
14. Always follow the instructions on warning labels applied on the machine.

15. Never touch the switches with wet hands.
16. Before operating any switch, always confirm its position and function.
17. Before running the machine, always tidy up your work area to ensure safe conditions.
18. Be sure that there are not other persons or obstacles in the protective covers or rotary parts.
19. Always enter the machine after having stopped completely.
20. In order to protect the operator, all the driving parts of the machine are equipped with protective cover.
21. If you have noticed any unusual noise, vibration and/or electronic control system fault of the machine, immediately stop the machine.
22. The electric part must have a good grounding protection when the machine is being installed.
23. If the machine is not working, please check whether the power is good or check whether the fuse is blown.
24. The working voltage must be in compliance with the specification.
25. In case the machine must be used after a transfer or a long period of inactivity, it is advisable to ask for the assistance of **Dingxing - Dongguan Dingyi Machinery Co., Ltd.**
26. In case you are not able to remove a failure by yourself or in case you are in difficulties, do not make risky repairs attempts, please call an agent of **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** of your district.

The following safety warning labels are applied to this machine. The operators and maintenance personnel should follow the safety warnings. If any of the safety warnings has come off or become unidentifiable, always apply a new warning label.

Safety Warning Labels are used on the machine and procedures in this manual, they alert you to it's existence and relative degree of hazards, it contains important information about personal safety during operation or near the machine. Understanding safety alert symbols guarantee operator safety, review carefully following symbols.

Safety Alert Symbols

 CAUTION	Potentially destructive situation which if not avoided, may result in damage or reduce the longevity of the equipment.
 WARNING	Potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
 DANGER	Potentially hazardous situation, which if not avoided, could result in death or serious injury.

Chapter 2:

MACHINE IDENTIFICATION

A) Plate Identification



Here after you can take note of the name plate applied on our machines. It is generally placed on the top, on the left or right side it can be consulted by customers each time it is necessary.

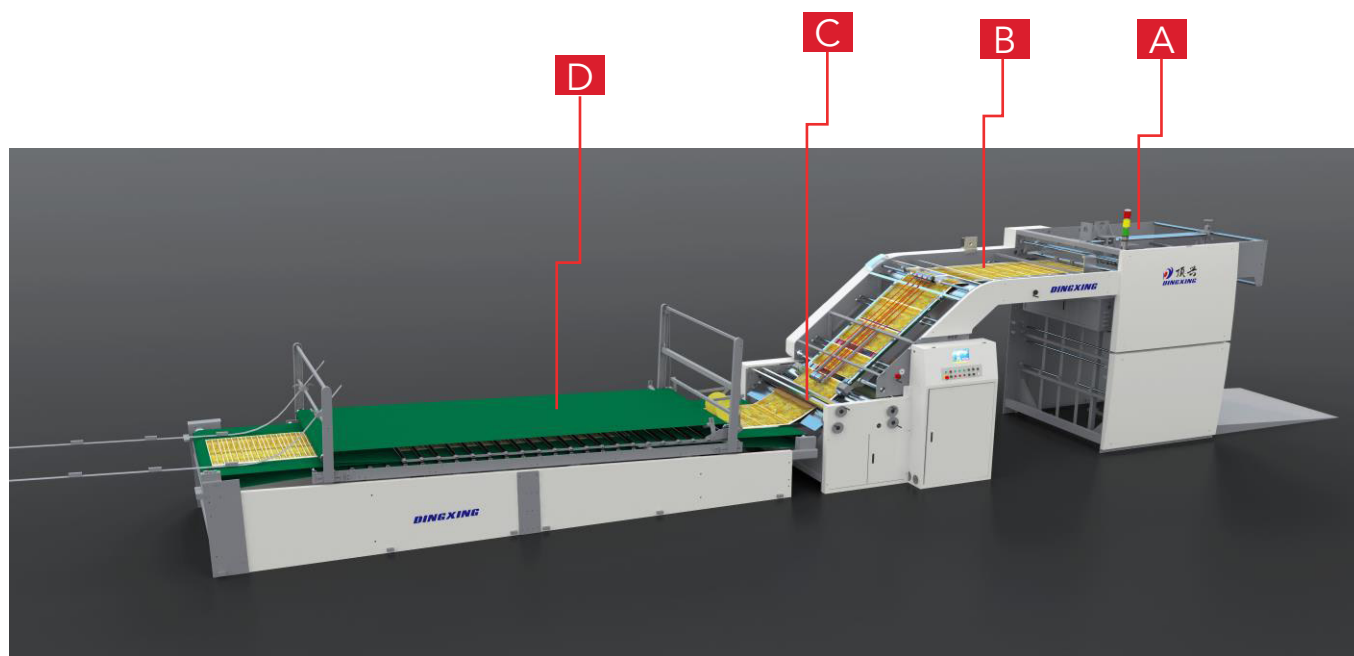
The following data are reported on the name plate:

Code	Description
A	Machine Name
B	Size
C	Machine Model
D	Voltage
E	Date of Production
F	Weight
G	Frequency
H	Factory Number

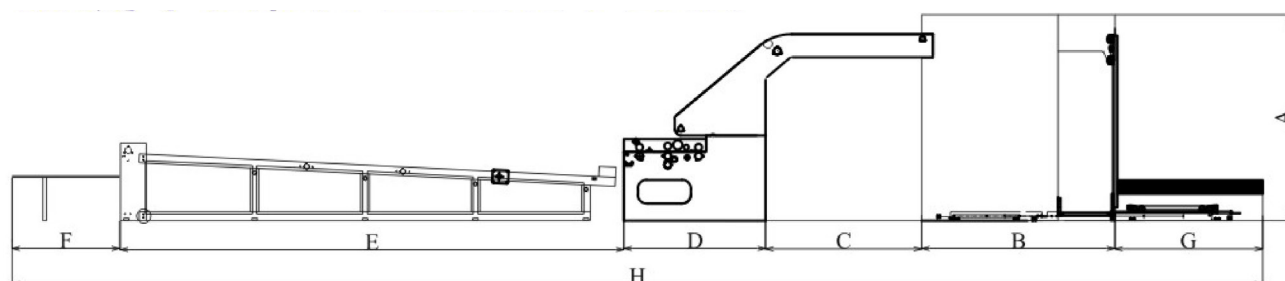
Chapter 3:

MACHINE DESCRIPTION

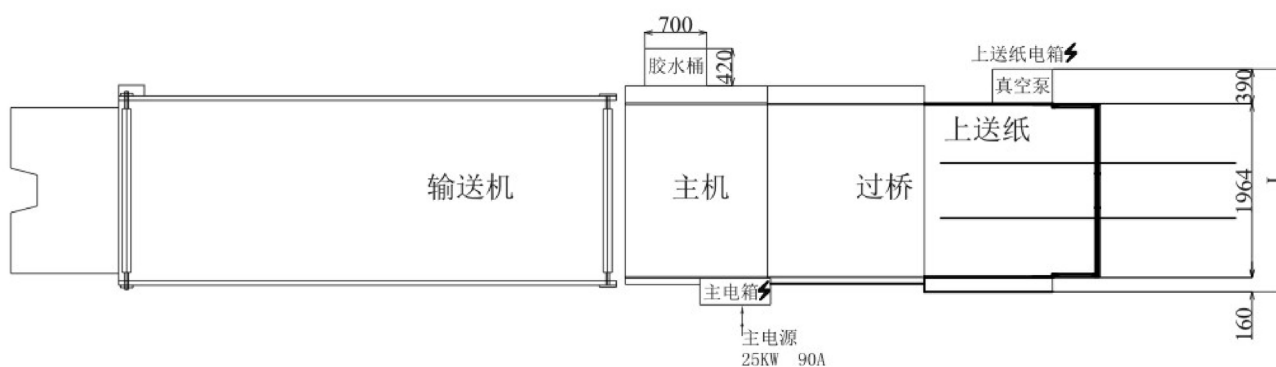
MACHINE DESCRIPTION



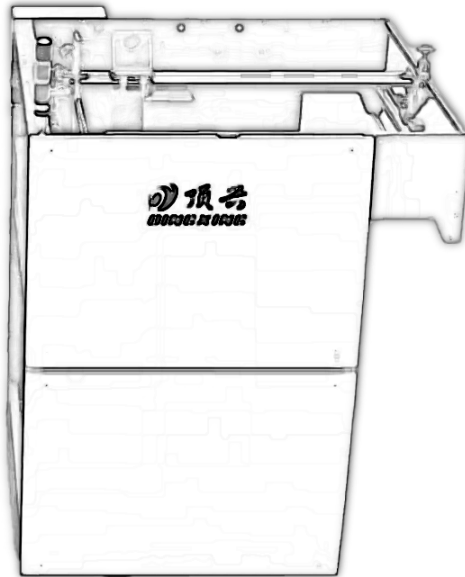
Code	Description
A	Top Sheet Feeder
B	Conveyor Bridge
C	Bottom Sheet Feeder
D	The Pressure Transmission Belt



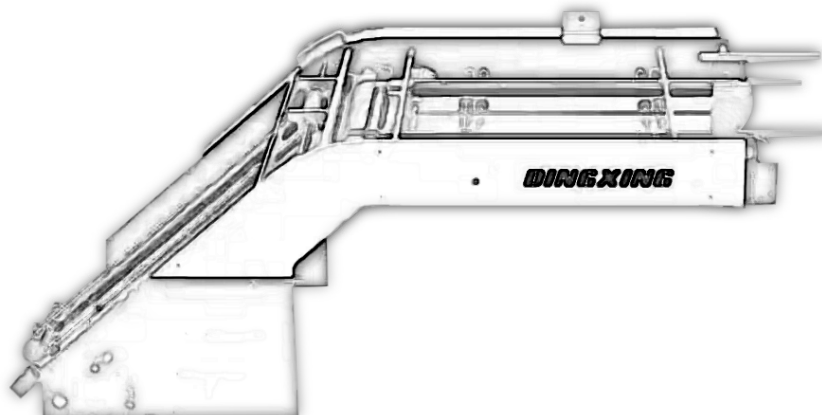
Code	Description
A	2180
B	1450
C	2900
D	1610
E	6520
F	1750
G	2462
H	16692
I	2964



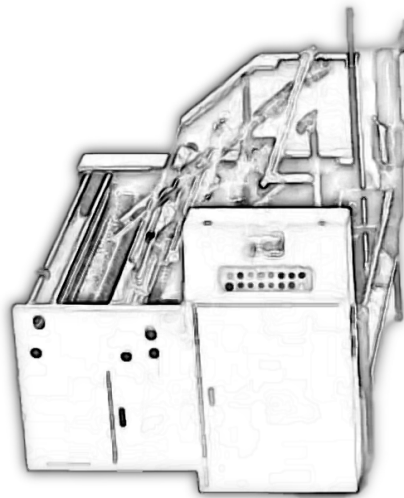
A) Top Sheet Feeder



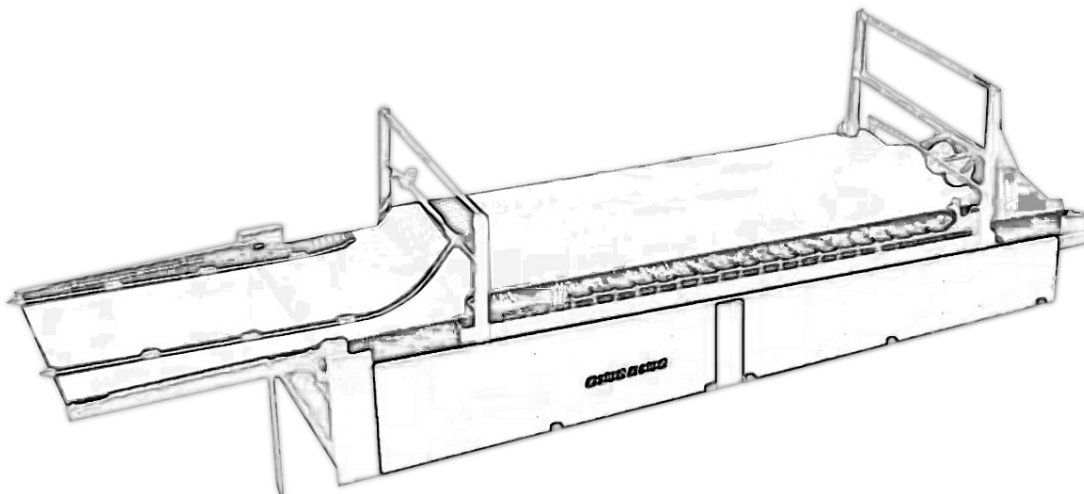
B) Conveyor Bridge



C) Bottom Sheet Feeder



D) The Pressure Transmission Belt



Chapter 4:

TECHNICAL PARAMETER



HIGH SPEED FLUTE LAMINATOR MODEL DX-2100

Electrical Requirements		Product	High Speed Flute Laminator
Voltage	380V	Brand	DINGXING
Phase	3PH + PE	Model	DX-2100
Frequency	50 Hz	Origin	China
		Application	Litho Laminator

Operation Conditions		Overall Dimensions	
Operating Temperature (°C)	10-50°C	Length	17607 mm
Maximum Operating Temperature (°C)	50°C	Wide	2964 mm
Installation Place Room Temperature (°C)	Min. 10°C Max. 50°C	High	2180 mm
Relative Moisture	Min. 45% Max. 75%	Weight	8000 Kg
Altitude (m)	100m Above Sea Level	Floor Area Requirement	
		FALTA	

Technical Specifications	
Max. Sheet Size (W*L)	2100*2100mm
Min. Sheet Size (W*L)	500*450mm
Thickness Top sheet	120~600gsm
Thickness Bottom sheet	0.5-10mm
Laminating Accuracy	±1mm (subject to paper cutting precision)
Max. Speed	150 m/min (Subject to board quality and specification) e.g., around 10,000 sheets/hour at length 600mm
Power	AC380 / 50HZ / 29KW
Dimension L*W*H	17607mmx2964mmx2180mm

Chapter 5: INTRODUCTION

1.1 Function & Information

This High-speed Auto Flute Laminator is capable to laminate and glue combination of corrugated board and any type of upper paper or board together. After shearing or mold cutting, the laminated products can be made to be carton case, box and related products.

- This machine must not be used for other purposes and must not laminate other materials than the above to prevent from accidents.
- This operation manual introduces how to operate and maintain the machine effectively. Operators, engineers, technicians and electricians must read this manual carefully before running the machine.
- Improper operation would result in faults and damages to the machine and accidents to the operators. Only professional operators and maintenance staff are allowed to operate and maintain the machine accordingly , otherwise, Dingxing should not be responsible for any accidents therefore incurred.
- Don't modify the machine without Dingxing's authorization.
- Operation Manual is property of Dingxing and not allowed to copy or transfer to other party.

1.2 Basic Parts

- A. Upper Paper Feeder: a pile of 100~800 gsm paper to be delivered rapidly and smoothly from the upper side.
- B. Bottom Cardboard Feeder: 0.5~10 m/m cardboards to be fed from the lower side.
- C. Gluing System: glue to be applied between the cardboards from the Feeder.
- D. Aligning Unit: aligning and timing with synchronous pushing lays that makes precise lamination of two pieces of paper with pre-set allowance.
- C. Pressing Conveyor: horizontal platform paper overlap system with upper/lower pressing conveying belt to make glued sheets be dried and stuck during the process.
- D. Delivery Unit: laminated sheets to be delivered to the Collecting Table.

1.3 Principle of Machinery

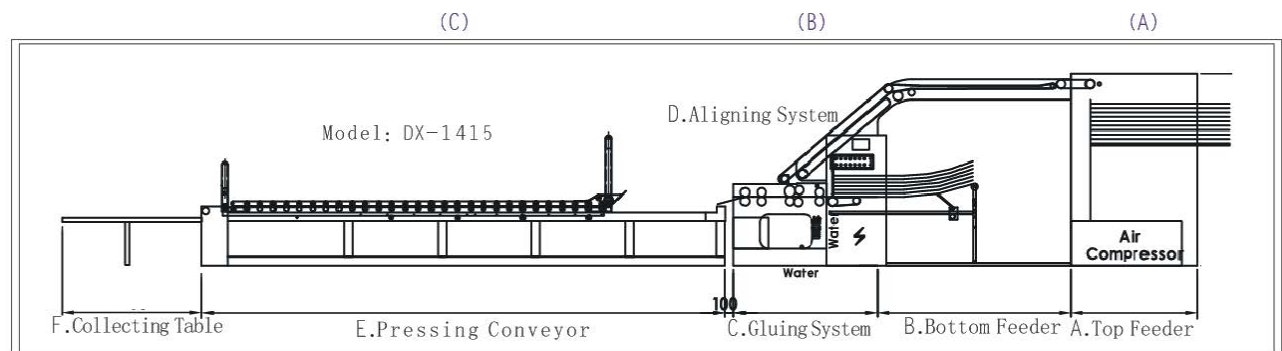
When upper paper is delivered from Upper Paper Feeder to Aligning Unit, bottom paper is forced to feed out against activated detector, then bottom paper is glued by gluing rollers, upper paper and bottom paper are respectively transferred to synchronous detectors at two ends. After detecting, Control System computes an amount of time error between delivery of upper paper and bottom paper. Simultaneously, upper paper is compensated to preset position to obtain better lamination by servo-compensating motors at two sides, then the laminated sheets are pressed tightly by Pressing Conveyor and transferred to Delivery Unit.

1.4 Production Materials

Upper Paper: 100~800 g/m thin paper and cardboards.

Bottom Paper: 0.5~10 m/m one-sided corrugated boards, multi-ply corrugated boards, pearl boards and cellular boards.

Glue: Resin or Starch with PH at 6~8 suitable for lamination.



Chapter 6: DISMANTLING, INSTALLATION & TEST RUNNING

A) General

The machine is usually installed by **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** technicians. In case it must be removed, the operation must be performed by skilled and authorized personnel. Once they have reached the customer, our technicians begin the machine/plant loading/unloading operations. Afterwards, they must control that packings are undamaged, it means, that the machine has not suffered any damages caused by shocks, wrong handling or atmospherically agents.

The technician will check the integrity of the equipment also during the phases subsequent to the packing first opening. The technician also must control the foundations conditions and relative pre-arrangements necessities to installation; it means: the accuracy of foundations wholes wherever required suitable cement quality through a drilling test on the area where the rails are going to be installed. **When apply.**

Prearrangements must be provided: water supply distribution, compressed-air distribution, the presence of power supply cable, and the installation of a line side isolate. The installation starts, with the installation of main tracks, using the suitable tools for subsequent levelling.

The technician concludes the mechanical assembling and check that each part is closed, adjusted, tightened and it can perform its final functions.

Now nothing is left but supply power to the main control panel, so its required that the customer provide an adequately electric infrastructure.

Each group of functionality at this point, is tested and it is advisable that from now on and for on, your maintenance personnel and your production manager or operator, support our technician, because, it is very useful for them, to follow functional test operations in order to know the functions of each operation, mechanisms and even the ones that in the future the operator will never have to adjust or repair.

Beginning from the group, the technician, makes sure that each button of the control panel corresponds with the suitable function: Start, stop, acoustic signal, pressure raising or lowering, movements, etc.

Those operating mechanisms responsible for the safety of workers assigned to the machine or plant are very carefully controlled: Stop button and alarms to signalize that photocells limiting the access are working.

According to us, the operations above mentioned must be performed with the assistance of your personnel, in this way, will become familiar with troubleshooting problems that often occur during this phase. In order to achieve a correct professional personnel training, the technician himself, will perform adjusting, inspecting and working operations.

The technician will mention the dangerous maneuvering for the safety of workers. The operator must maintain a safe distance from the machine and not to stand under the fastening bands or under the machine.

The personnel have to learn all production cycles in order to become familiar with the machine main functions and its operating mechanism until it is self-sufficient, always under technician's control.

The technician will also simulate with personnel possible emergency conditions, in order to control that operators perfectly remember the position of stop and emergency buttons at the plant.

The machine arrives to customer's facilities, unassembled in 4 pieces, each one, must be unloaded separately, the operator must keep a safe distance from the machine and not to stand under the fastening bands or under the machine.

2.1 Dismantling

2.1.1 Lift the upper paper holder to a height of 750mm from the floor, and hold it with four M12 inner hexagon screws. During this movement, swing should be avoided to prevent elevating chains from damage.

2.1.2 Paper Support Stand shall be adjusted to the minimum. Swing should be avoided to prevent Paper Support Stand from bending.

2.1.3 Pressing Conveyor should be adjusted to the maximum length in order to maintain balance during lifting by crane.

2.1.4 Lift the elevating platform of Delivery Unit to a height of 750mm and hold it with four M12 inner hexagon screws. During this movement, swing should be avoided to prevent elevating chains from damage.

2.1.5 Disconnect wirings of control panel cabinet of Pressing Conveyor and Feeders and connectors of corrugated pipes. Remove all wirings and wire harness from the cabinet.

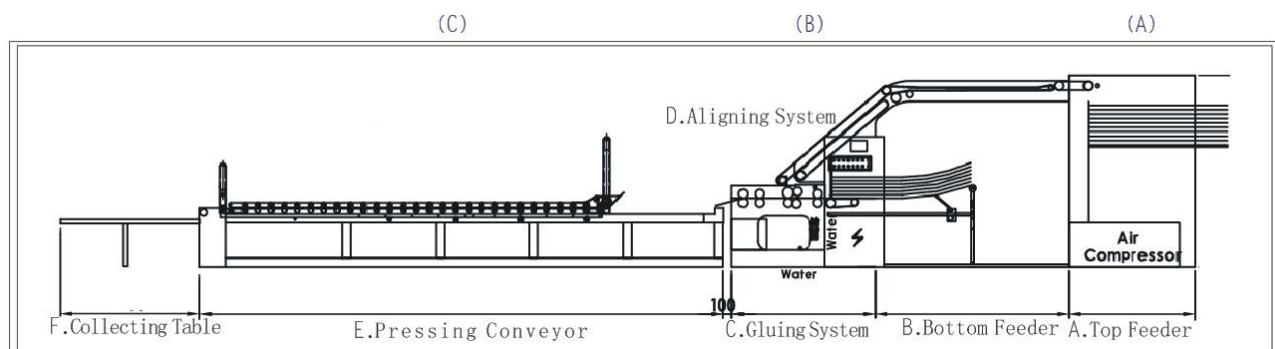
2.1.6 The complete machine can be dismantled into three parts: (A) Feeding Unit, (B) Main machine and (C) Pressing Conveyor.

2.2 Handling (As shown in the following figure)

2.2.1 Load one machine into a 40' container.

2.2.2 Load it with the aid of a forklift.

2.2.3 Preferable loading sequence: Part (C) first Part (B) secondly and finally Part (A).



2.3.1 Inspect field environment before opening the boxes, and guarantee sufficient space for handling in advance.

2.3.3 Place the pads beneath the adjusting screws.

2.3.5 Calibrate Part (B) with a level and loosen adjusting screws finely for better leveling.

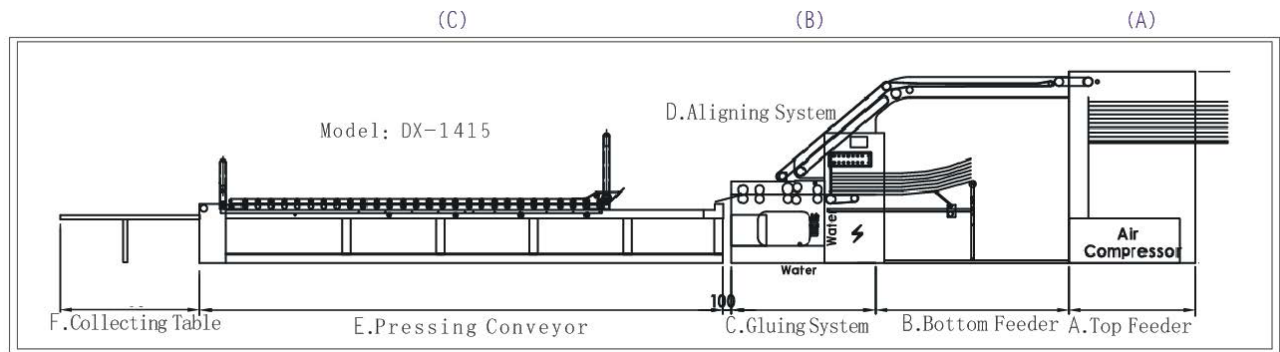
2.3.7 Level calibration of Part (A) & (C) same as Part (B).

Technical drawing of the machine showing side and top views with dimensions. The side view shows a long horizontal structure with a vertical support on the left and a control panel on the right. The top view shows the overall footprint of the machine. Dimensions are provided in millimeters (mm).

Dimensions (mm):

- Overall width: 10790
- Overall height: 2160
- Distance from left edge to start of main body: 1220
- Length of main body: 4620
- Distance from end of main body to control panel: 1650
- Distance from control panel to right edge: 2000
- Distance from right edge of main body to control panel: 9570
- Distance from control panel to right edge: 1200
- Distance from left edge to end of main body: 5840
- Distance from end of main body to control panel: 1650
- Distance from control panel to right edge: 2000
- Distance from right edge of main body to control panel: 9570
- Distance from control panel to right edge: 1200





2.4 Test Running

2.4.1 Loosen locking screws of both paper holder on Paper Feeder and elevating platform of Delivery Unit.

2.4.2 Connect 3 core cables to AC 380V power supply, another 1 core to ground.

2.4.3 **Try running air pump to see if turning direction of carbon vanes is correct.**

Chapter 7:

OPERATING CONTROLS

3.1 Operating Controls of Upper Paper Feeder

A: Press button switch for emergency stop.

B: Main motor ON.

C: Main motor OFF.

D: Paper Feeder ON.

E: Paper Feeder OFF.

F: Press to lift paper holder.

G: Press to lower paper holder.

H: Press to stop elevation of paper holder.

I: Manual knob for adjusting width of Paper, wider to the left and narrower to the right.



3.2 Operating Controls of Main Machine

A: Press button switch for emergency stop.

B: Main motor ON.

C: Main motor OFF.

D: Paper Feeder ON.

E: Paper Feeder OFF.

F: Pressing Conveyor ON.

G: Pressing Conveyor OFF.

H: Auxiliary Fan Toggle Switch: up is for ON and down is for OFF.

I: Control Switch for Bottom Paper Pressing Plate (10.5/ 0504): Press ing Plate goes downward when the switch is up, and Pressing Plate goes upward when the switch is down.

J: Manual/Auto Selector Switch for Paper Feeder: Bottom paper are fed out when turning to the left; upper paper are fed out when turning to the right; and paper are fed automatically when turning to the middle.

K: Aligning Unit: It aligns the upper and bottom paper to the left when turning to the left; it aligns the laminated sheets to the right when turning to the right; and it aligns to the left and the right simultaneously when turning to the middle.

L: Lamination Difference Adjusting Unit: Upper paper moves beyond bottom paper when turning to the left while lamination of upper paper lags behind when turning to the right.

M: Paper Length adjusting Switch for Pressing Conveyor, the paper adjusting length becomes longer when turning to the right and shorter when turning to the left.

N: Length Adjusting Switch of Bottom Paper Support: Length becomes shorter when turning to the left while longer when turning to the right.

O: Gluing Pump Switch: It is manual when turning to the right while it is automatic when turning to the left. Gluing pump is switched off when turning to the middle.

P: Lamp Switch.



Chapter 8:

OPERATIONAL INSTRUCTIONS

WARNING

The machine must be started up and used only after that service and maintenance personnel has carefully read the present manual. The entrusted personnel must have fully read and understood its contents. The firm **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** declines all responsibility for each failure occurring in consequence of improper and incautious operations, not in conformity with the present manual directions, carried out by unskilled or skilled personnel.

The present instructions are addressed to qualified or experienced operators. In order to prevent damages to people or things, **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** recommends Customers to adequately inform operators about the risk deriving from the use of the machine. In case the machine is used by inexperienced personnel, it would be advisable that qualified personnel support inexperienced one using the machine. The operator must always make use of his personal protection means by law and what the employer places at his disposal.

Personnel responsible for the equipment maintenance must be practiced and fit for the kind of duties, he must show the necessary reliability in order to ensure safety and scrupulous controls and maintenance works.

Before running, please ensure all safety devices work properly.

4. OPERATIONAL INSTRUCTION

4.1 Initially, measure paper size and enter it into main machine interface. If paper size needs record, please enter lot number and paper quantity on every pallet. Meanwhile, lamination difference between upper paper and bottom paper is changeable, do not need to enter the change if difference is not changed.

4.2 After assuring that the adjusting point is normal with no obstacle, press preset button for 2 seconds to load the above parameters into control system, therefore, main machine and frames of upper paper and bottom paper could be automatically adjusted and calibrated to meet the entered parameters.

4.3 Stack upper paper into feeding platform uniformly, press elevating button (P3.1/F). Piled paper will be lifted to an appropriate position, thus operator can leave at this moment.

4.4 Stack bottom paper to Bottom Paper Feeder. If bottom paper is too much long, adjust support roller of paper tail base to the appropriate position (3.2/N).

4.5 Measure thickness of bottom paper and upper paper, then adjust the clearance of main machine rollers to be the same thickness of bottom paper, and the clearance of press rollers should include both the thickness of upper paper and bottom paper (6.1).

4.6 Put the machine on Idle running and check if water level of bottom tank has reached lower end of water roller (bottom gluing roller has water trace). If not so, please fill water. Moreover, water should be continuously added little by little in order to prevent rubber water roller from damaging when water is insufficient in the process of production.

4.7 Turn off glue pump, and adjust the clearance of glue adjusting roller to attach proper glue volume.

4.8 Please confirm if adjustment and calibration position is correct. If so, you may turn on the main motor. After main motor has been adjusted to an appropriate revolution speed, press bottom paper feeder switch to start production.

4.9 In the event of shortage of bottom paper or upper paper during production, main machine will stop feeding automatically. After materials are supplied again, press lower paper feeder switch again.

Chapter 9:

TROUBLE SHOOTING

5.1 Aligning Error

5.1.1 Laminating Front Edge Error

After lamination of two pieces of paper, if front edge error is not within ± 1.5 mm, such an error shall be corrected by compensating the position of both left and right rollers on machine interface. The standard compensation value of left and right rollers is 45, increase the value (45↑) to move the upper paper forward and decrease the value (45↓) to move it backward, so that the upper paper and bottom paper could be parallel to each other more accurately in the front edge. If above compensation is not working, check if photo cell sensors (5.1.1/A/B) are stained with glue or other debris and clean them thoroughly.

5.1.2 Laminating Side Edge Error

After lamination of two pieces of paper, if side edge error is not within ± 1.5 mm, check during slow production if the side edge of upper paper is moving along aligning side stopper when upper paper is fed there. If fails, make an appropriate adjustment from width adjusting point at main machine, or to make a proper adjustment at width adjusting point at upper paper feeder and/or lower paper feeder so that aligning side of piled paper is capable of moving left or right.

5.2 Unexpected Stop during Production

5.2.1 Upper Paper Feeder

In case of production stop due to failed feeding or being stuck in suction of upper paper check if adjustment or calibration of airhead is proper and standard, and make adjustment as (6.4) thereof.

5.2.2 Cardboard Feeder

In case of production stop due to failed feeding or being stuck in suction of upper paper check if front paper stop board (10.5-0505) is too tight. If so, loosen it properly.

5.3 Uneven Glue

5.3.1 Glue Adjusting Roller

In the event of adherence of any oil stain or foreign matter, it may result in uneven gluing, clean glue adjusting roller (10.8-0801) thoroughly.

5.3.2 Copper Plate

Rub off the glue stain adhered on the copper plate, which will result in uneven thickness of gluing.

5.3.3 Uneven Paper

In case of unevenness of paper, it tends to result in uneven gluing, as a result, it must flatten bottom paper or replace paper or narrow clearance of main machine rollers (6.1.5) to suspend spraying any glue.

5.4 Wrinkles on Laminated Sheets

Uneven corrugated boards might result in wrinkled lamination, then increase the water volume of bottom gluing rollers to moist the boards to solve this problem.

5.5 Overflow of Glue

5.5.1 Overflow Glue at Paper Tail

If upper and lower press rollers are stained with glue, it means that the gluing is excessive or the clearance of pressing rollers are too small to cause overflowing from the paper tail. Reset the glue volume (6.1.1) or increase the clearance (6.1.3) between rollers.

5.6 Troubleshooting for Electrical System

5.6.1 Motor Fails to Start

5.6.1.1 If any error code shows on the display of motor converter, solve the problems as per the description of operation manual.

5.6.1.2 Check if pushbuttons or wires are loose or burnt. If so, repair and replace the same.

5.6.1.3 Check if motor is burnt. If so, please replace a new one.

5.6.2 Paper Pressing Unit Fails to Run

Check if frequency converter trips due to over voltage or over current, check as per operation manual of the converter, or switch off paper pressing unit (SB15) to reset or press emergency stop switch (SB3, SB4, SB5 & SB6) to re-start.

5.6.3 Operating button is idling at Auto mode or machine stops unexpectedly or main motor fails to run

5.6.3.1 Check if side safety switch (10.7-07-A) is stained or lighted by some foreign matter.

5.6.3.2 Check if sensor is not in position or reflects other objects or its reflection is too long or stained. If so, adjust the sensor to the standard reflection distance or clean the stain.

5.7 Quality Problem for Laminated Sheets

5.7.1 Quality of paper and cardboards

If the size of paper and cardboards are bigger than maximum, cut to the appropriate size. If paper or cardboards are uneven or bent, then block up the bent side of piled paper to flatten the same to avoid feeding problems. Replace low quality paper or boards.

5.7.2 Glue

Glue made of resin or starch with PH 6-8.

Chapter 10:

ADJUSTMEN & CALIBRATION

6. ADJUSTMENT & CALIBRATION

6.1 Adjustment & Calibration for Lamination

6.1.1 Rocker Arm of Glue Adjusting Roller (10.8-0801)

It is used to adjust clearance between glue adjusting rollers and gluing rollers to make glue even on bottom paper, so glue adjusting roller should be parallel with gluing roller. Lamination will be affected if glue is excessive on one side and is insufficient on the other side.

6.1.2 Rocker Arm of Laminating Upper Roller(10.8-0805)

It is used to adjust the angle exactly when the upper paper begin to touch and laminate the bottom paper. If laminating upper roller is too high, the upper paper will be longer than bottom paper, and vice versa; as a result laminating upper roller should be adjusted to the proper position on the basis of paper thickness.

6.1.3 Rocker Arm of Press Upper Roller

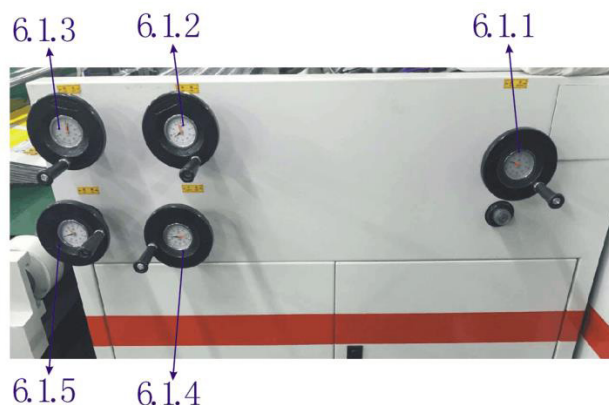
It is used to improve accuracy for first pressing after lamination so as to prevent upper paper and bottom paper from sliding. Meanwhile, press upper roller shall be duly adjusted on the basis of paper thickness. Over tightness or over looseness may affect lamination accuracy.

6.1.4 Rocker Arm of Rubber Water Roller

It is used to adjust the tightness between rubber water roller and bottom gluing roller. Over tightness might cause damage to water roller; while over looseness might fail to clean bottom gluing roller and moisten corrugated boards. Therefore, pressure adjustment should be done slowly until the bottom gluing roller get proper water volume.

6.1.5 Rocker Arm of main machine clearance

It is used to adjust thickness of paper and gluing volume by measuring thickness of bottom paper.



6.2 Adjustment & Calibration of Belt

6.2.1 Lower Belt for Conveyor (Green)

As shown in Fig.1, adjust tightness of belt by turning screws at two sides with a #19 open spanner.

6.2.2 Upper Belt for Conveyor (Green)

As shown in Fig.2, make an adjustment to left or right by inserting T-shape #3 inner thread hexagonal spanner into belt.

6.2.3 Paper Bridge Transmission Belt (Green)

As shown in Fig.3 & 4, loosen the nut with a #14 open spanner, and adjust tightness of belt by turning screws with a #17 open spanner.

Fig.1

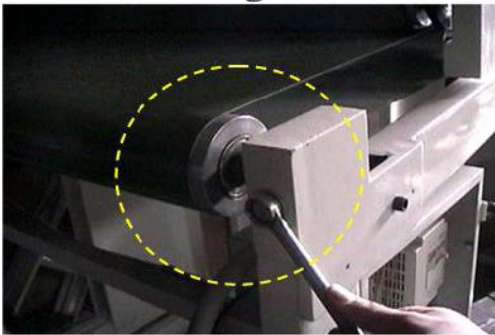


Fig.2

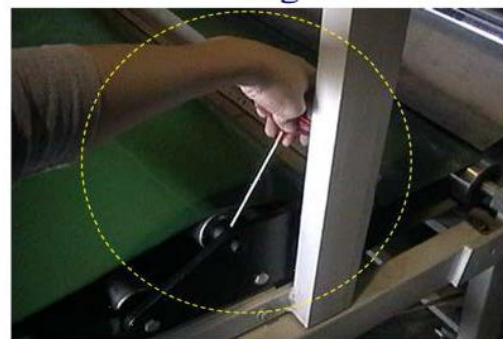


Fig.3

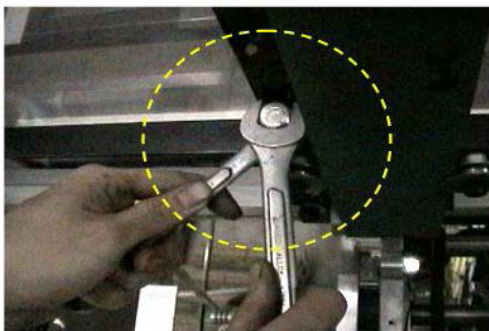
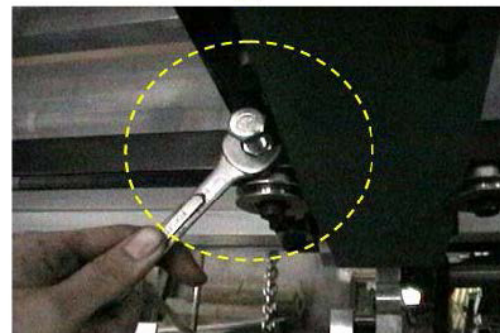


Fig.4



6.3 Adjustment & Calibration of Elevating Plate

This mechanism is to adjust the level of elevating plate by adjusting its four corners. Loosen the nut before adjustment (see Fig.1), and start adjustment by turning screws under elevating plate with a #10 hexagonal spanner (see Fig.2).

Fig. 1



Fig. 2



6.4 Adjustment & Calibration of Suction Airhead

6.4.1 Suction Cylinder

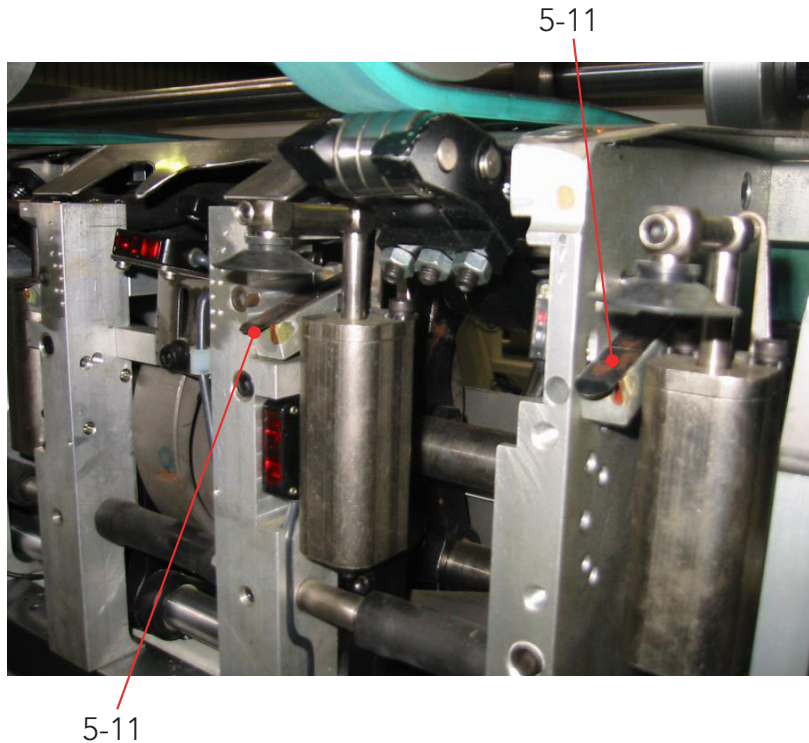
As shown in 5-1, the cylinder is the main part of suction device. Paper is sucked by a suction rubber nozzle. If suction air volume is not sufficient, the vacuum volume can be adjusted by vacuum ratio adjusting bolt on suction cylinder (5-9) when vacuum meter of air pump indicates normal air volume. Moreover, the suction cylinder must be taken off when adjusting vacuum volume. Turn the bolt clockwise to increase suction force and vice versa. After suction air volume has been properly adjusted, lock fixed nut (5-10) of vacuum ratio adjusting bolt.

6.4.2 Suction Rubber Nozzle

The rubber nozzle works together with suction cylinder to complete feeding movement. There are two sizes of rubber nozzle ($\phi 25$ & 32), which is subject to paper thickness.

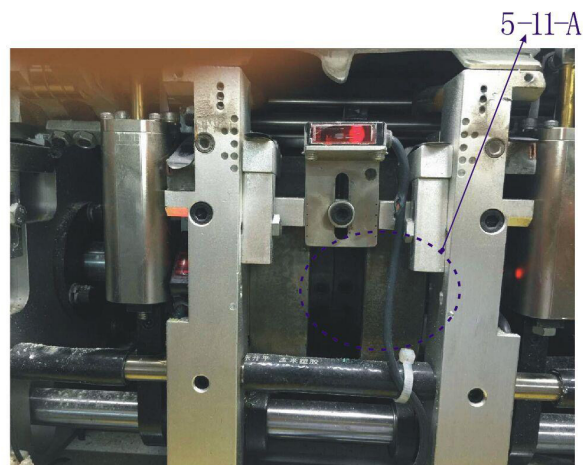
6.4.3 Paper Separating Spring (5-11)

There is a spring set to separate paper to avoid any double paper feeding after the cylinder sucks the paper. The spring set consists of four pieces of steel spring with different length, 40, 58, 57 & 56 from upper side to bottom side.



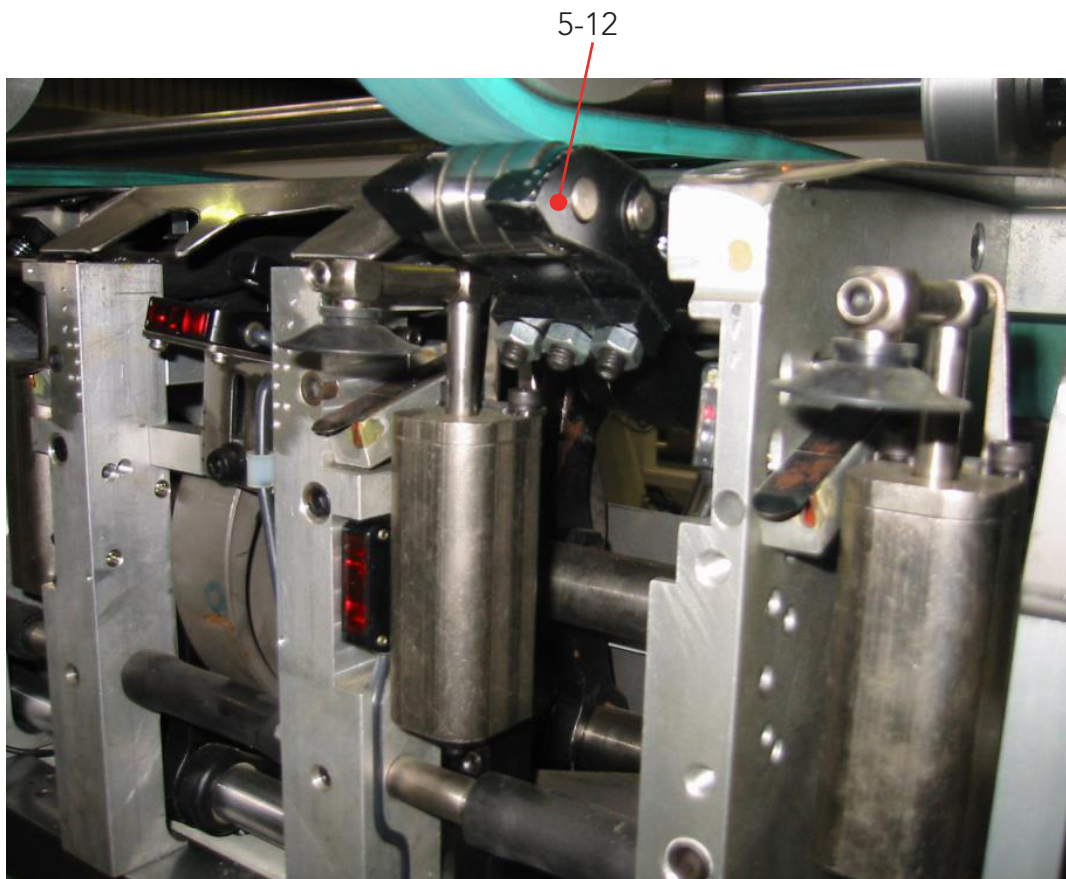
6.4.4 Prop Rocker

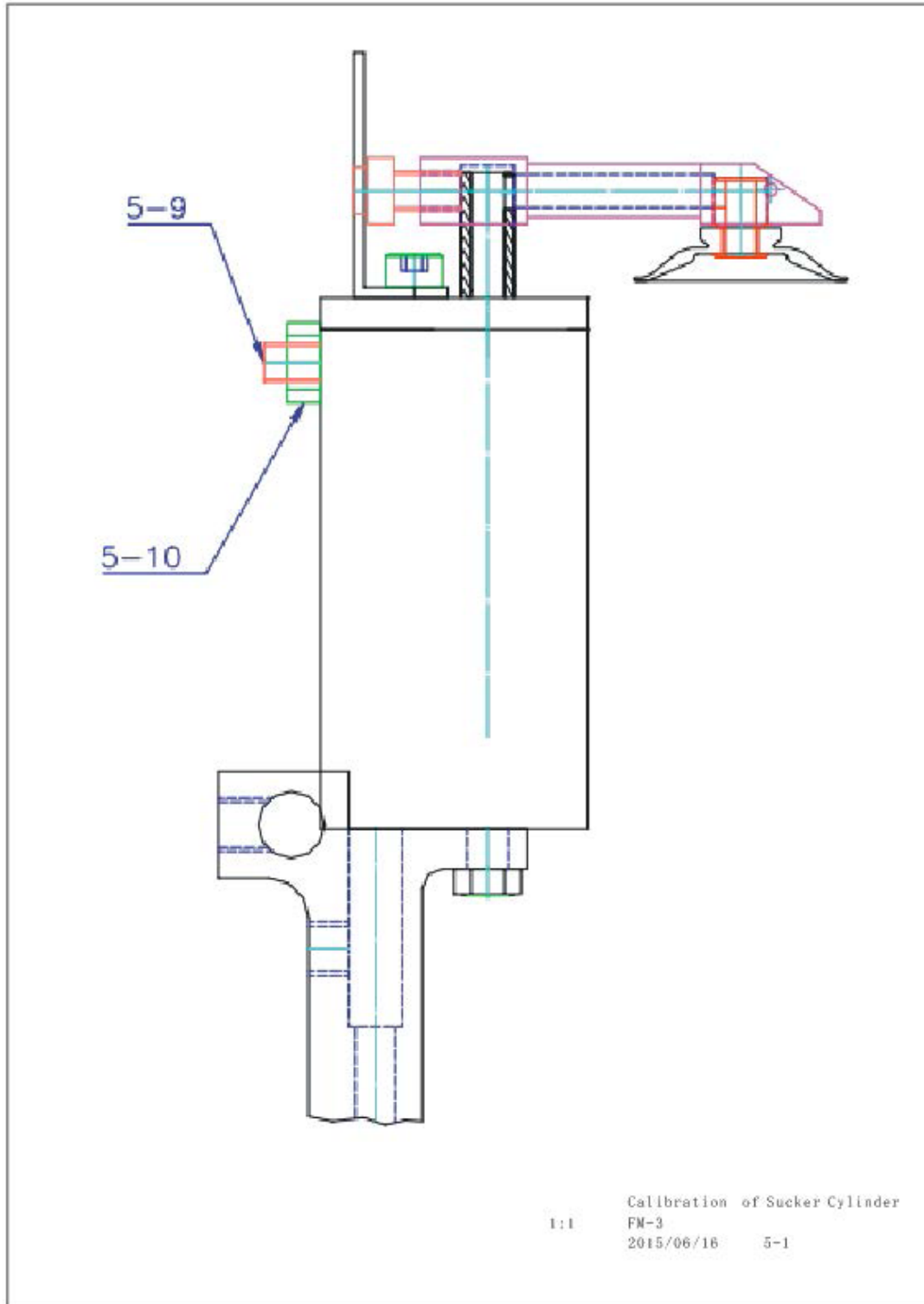
The mark point is H dot (5-11-A) when the dot line of right-sided cam meets aluminum bar groove, at this point, the upper paper is lifted to the highest position by an upper rocker arm and ready to feed out, meanwhile, the U-Type sensor (5-12-A) on the air corner is ready to shine the steel plate (the red light of U-Type sensor is on). If all mechanism of above devices can not reach standard position, loosen the stop screw on the connecting shaft (5-12-B) between airhead motor shaft and airhead main shaft, remove the H dot scale behind the mark point and adjust the steel plate to the shining scope of U-Type sensor.

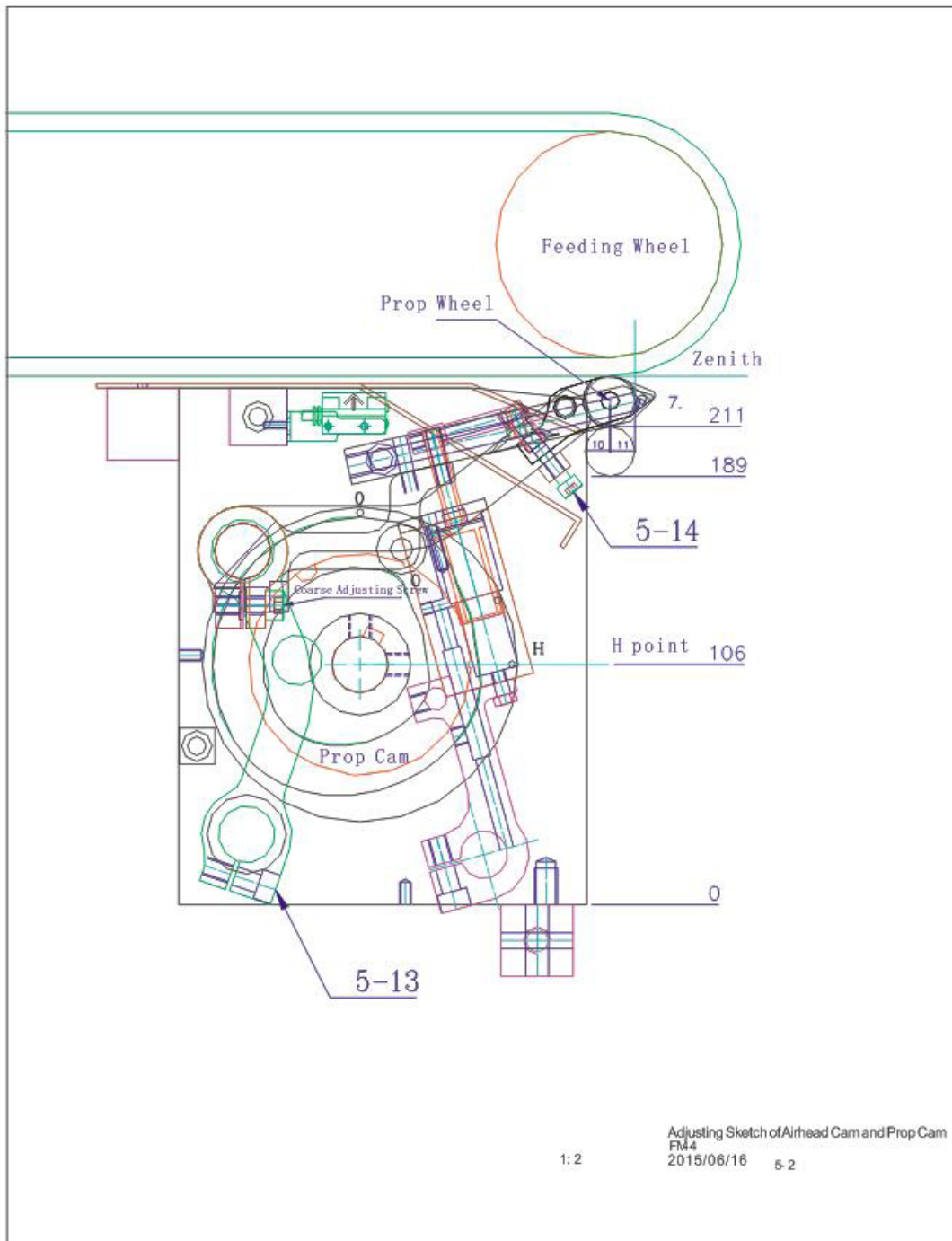


6.4.5 Upper Paper Rocker Arm (5-12)

As shown in Fig.5-1 and Fig.5-2, once paper is sucked, paper is raised by wheels to the apex and fed out through running engagement of feeder belt s and prop wheels. Where two prop wheels are not parallel or clearance of feeder belt s is too loose or tight, it is easy to make paper slant or delay feeding. Meanwhile, action of two prop wheels must be synchronous and parallel. If it fails, two prop wheels should be readjusted together with feeder belt by coarse adjustment of a screw (5-13) to make a little contact with the surface of feeder belt, and then tighten that screw, set the prop wheels parallel with feeding belts by finely adjusting screw (5-14), however, to avoid any impact, do not adjust too high.







Chapter 11: BASIC REPAIRS

7. Basic Repairs

7.1 Replacement of Belt

7.1.1 Rubber Belt (Red)

As shown in following figures, cut it to the required length, fix two ends of the red belt to the slot of belt connecting set, and there should reserve some space for inserting welding rod to the belt connecting set (Fig.1). Insert welding rod to melt the belt joint, then remove weld ing rod and press belt connecting set to connect two ends of red belt tightly, Lock the press nut until the belt cools off.

7.1.2 Paper Bridge Transmission Belt (Brown)

As shown in the figures, cut it to the length as required. Fix two ends of red belt to the slot of belt connecting set. Meanwhile, the space for inserting welded iron must be reserved for belt connecting set (Fig. 2). Insert welded iron in order to make joint of red belt melt (Fig. 4). After melting, remove welded iron and apply pressure to belt connecting set to allow two ends of red belt to join closely.Tighten press nut until it cools off.

7.1.3 Press Conveyor Belt (Green)

In case of crack, breakage, abrasion or elastic fatigue, please contact our aftersales department for replacement.

Fig.1

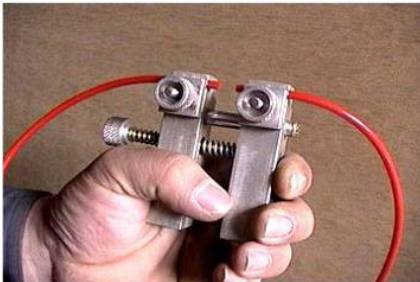


Fig.2



Fig.3



Fig.4



7.2 Replacement of Rollers

7.2.1 Replacement of Upper Rollers of Paper Feeding System

Take out the rocker arm on operating side (Fig. 1/A) and the gear on driven side (Fig. 2/B). Remove bearings on both sides and other obstacles to take out the roller. Reassemble all the parts as per the procedure of dismantling.

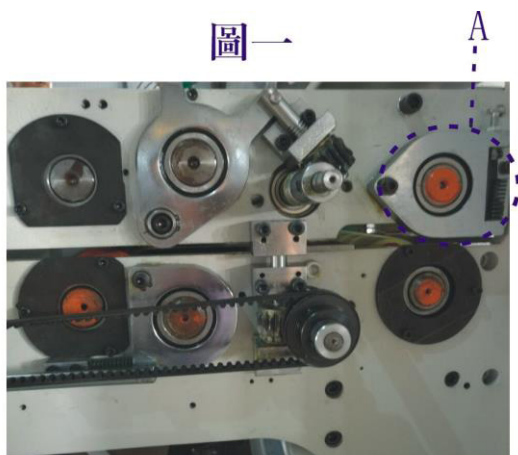


Fig. 1/A

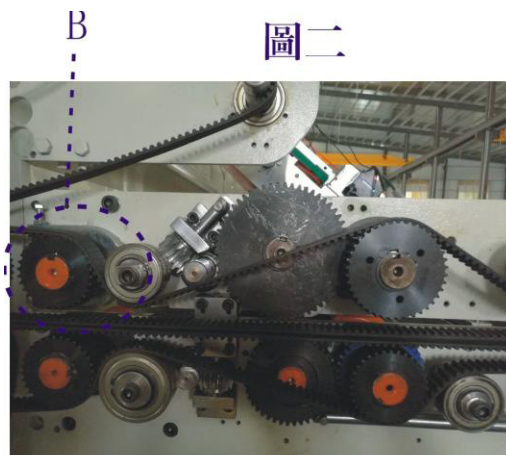


Fig. 2/B

7.2.2 Replacement of Bottom Rollers on Paper Feeding System

Take out the bearing cover on operating side (Fig. 3/A) and the gear on driven side (Fig. 4/B). Hammer the central end of the bottom roller on motor side, punch it out from the bearing. Reassemble all the parts as per the procedure of dismantling.

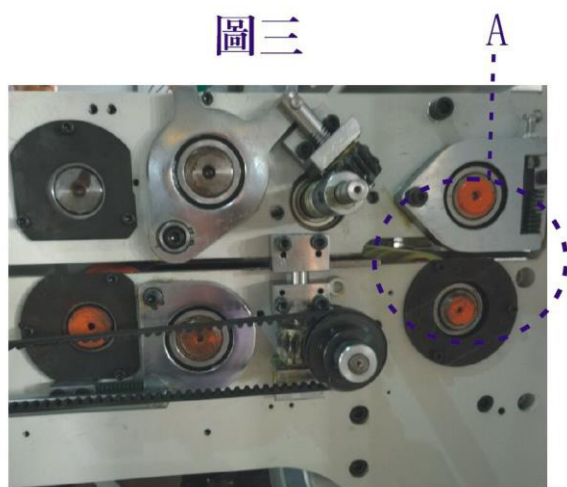


Fig. 3/A

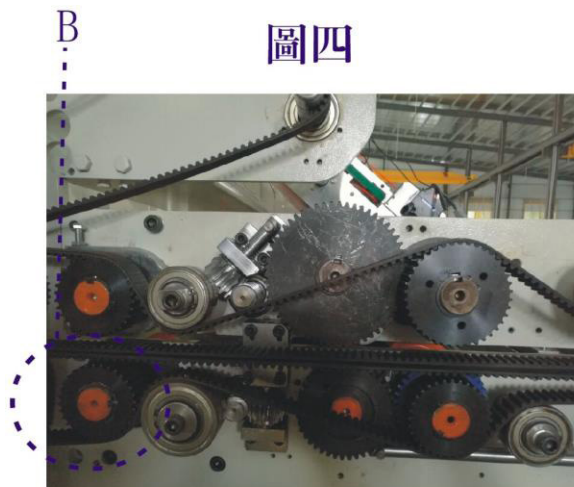


Fig. 4/B

7.2.3 Replacement of Glue Adjusting Roller

Take off the gear on driven side (Fig. 6/B) and the rocker arm on operating side (Fig. 5/A). Remove bearings at two ends, and take out the glue adjusting roller on operating side.

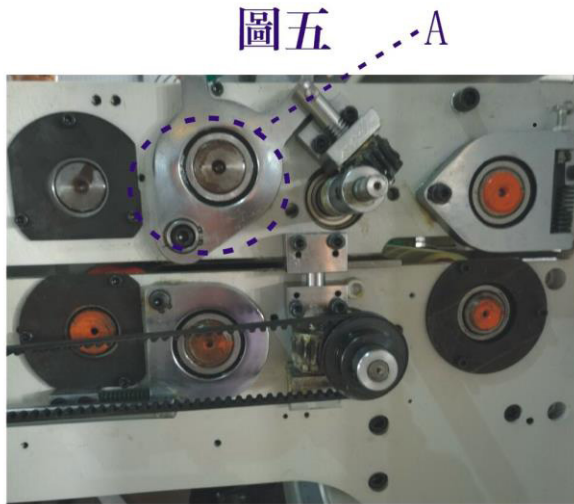


Fig. 5/A

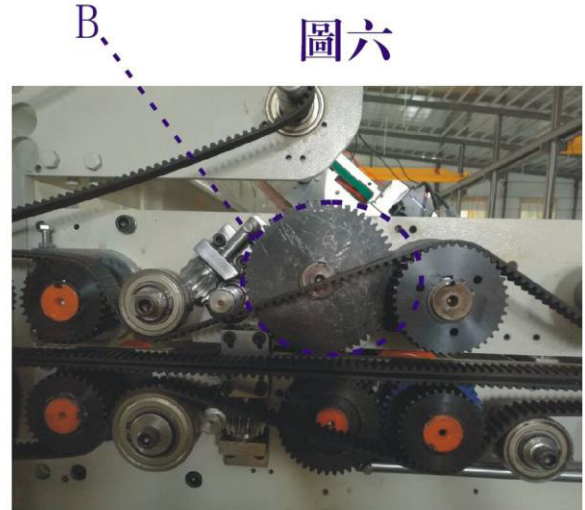


Fig. 6/B

7.2.4 Replacement of Rubber Water Roller

Take out the gear on driven side (Fig. 8/B) and the rocker arm on operating side (Fig. 7/A). Remove bearings at two ends, and take out the rubber water roller on operating side.

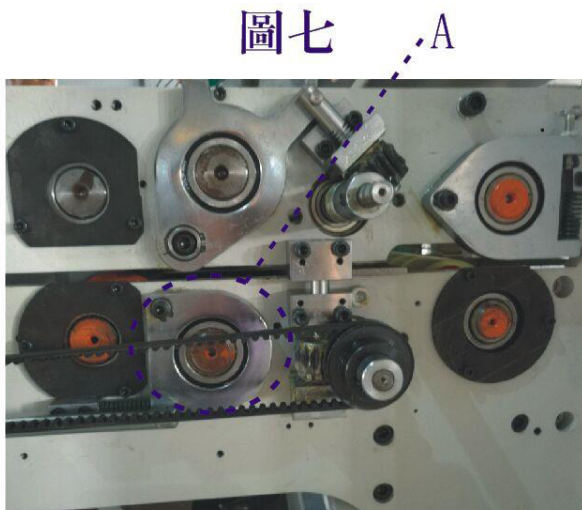


Fig. 7/A

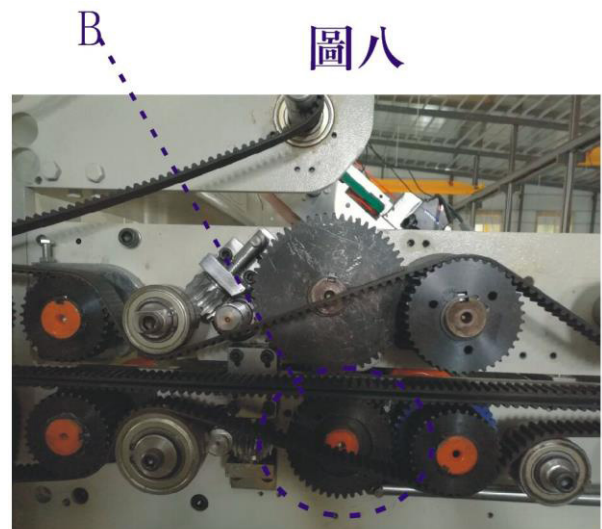


Fig. 8/B

7.2.5 Replacement of Gluing Roller

Dismantle the gear on driven side (Fig. 10/B) and the bearing cover on operating side (Fig. 9/A). Hammer from the central end of the roller on motor side, punch it out from the bearing

圖九 A

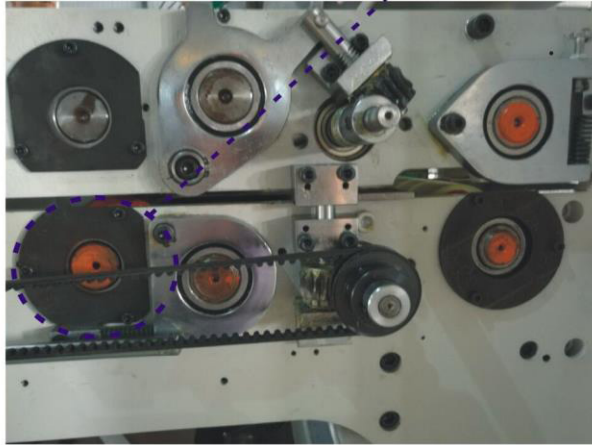


Fig. 9/A

B 圖十

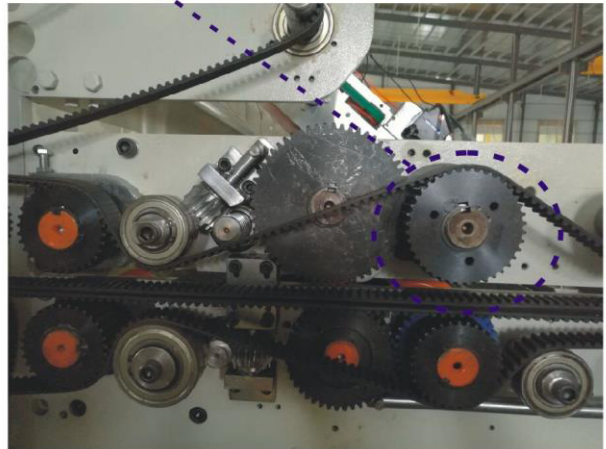


Fig. 10/B

7.2.6 Replacement of Bottom Gluing Roller

Dismantle the gear on driven side (Fig. 10/B) and the bearing cover on operating side (Fig. 9/A). Hammer from the central end of the roller on operating side, punch it out from the bearing. Reassemble as per the reverse procedure for dismantling.

圖十一 A

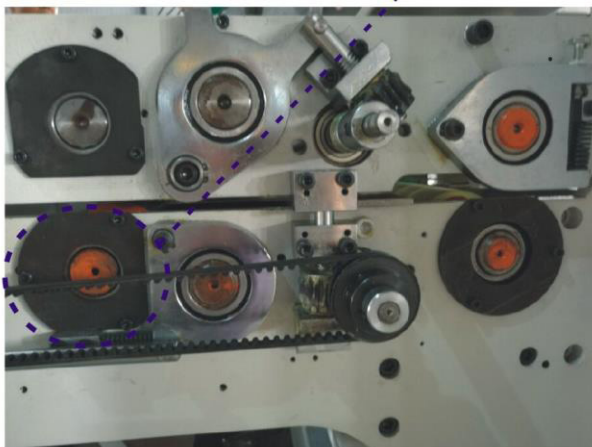


Fig. 11/A

B 圖十二

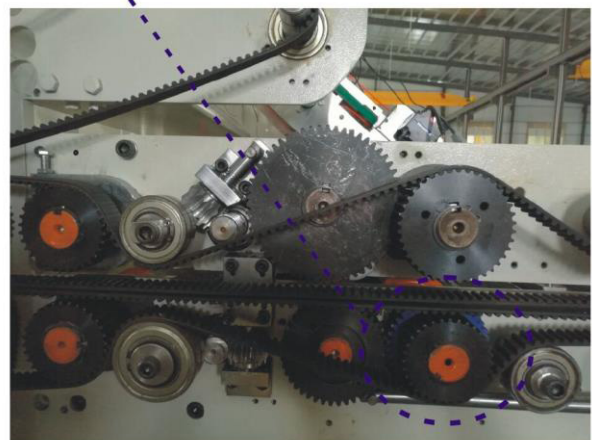


Fig. 12/B

7.2.7 Replacement of Laminating Upper Roller

Dismantle the rocker arm on operating side (Fig. 13/A) and the gear on driven side (Fig. 14/B). Remove bearings on both sides and other obstacles to take out the upper roller. Reassemble all the parts as per the procedure of dismantling.

圖十三 A

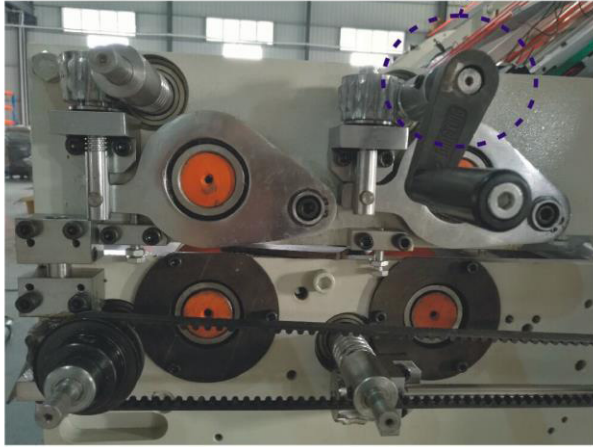


Fig. 13/A

B 圖十四

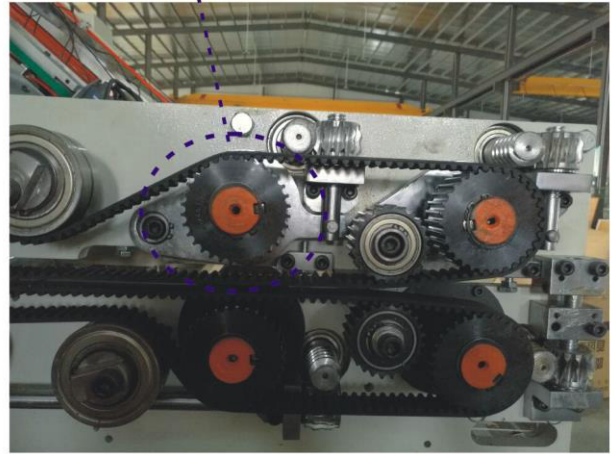


Fig. 14/B

7.2.8 Replacement of Laminating Bottom Roller

Dismantle the gear on driven side (Fig. 16/B) and the bearing cover on operating side (Fig. 15/A). Hammer the central end of the roller on operating side, punch it out from the bearing and take out under side. Reassemble all the parts as per the reverse procedure for dismantling.

圖十五 A



Fig. 15/A

B 圖十六

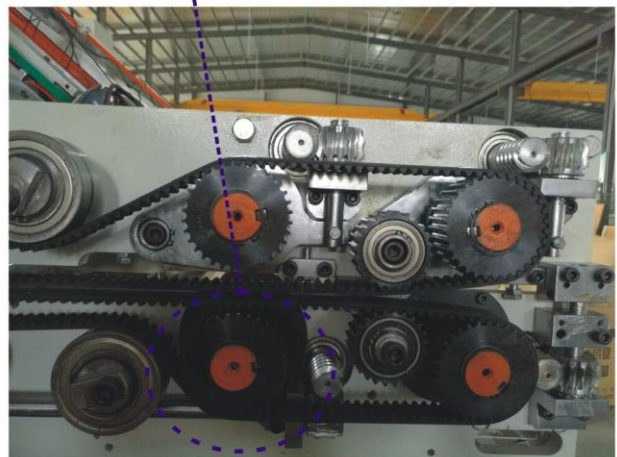


Fig. 16/B

7.2.9 Replacement of Press Upper Roller

Dismantle the roller on driven side (Fig. 18/B) and the rocker arm on operating side (Fig. 17/A). Remove bearings at two sides and take out the press upper roller from the top side. Reassemble all the parts as per the reverse procedure for dismantling.

圖十七 A

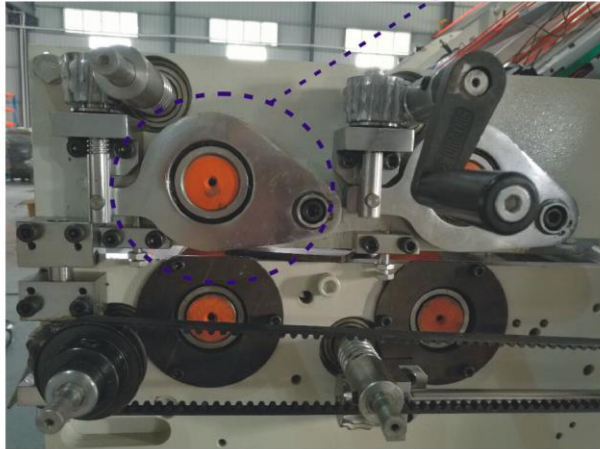


Fig. 17/A

B 圖十八



Fig. 18/B

7.2.10 Replacement of Press Bottom Roller

Dismantle the gear on driven side (Fig. 20/B) and the bearing cover on operating side (Fig. 19/A). Hammer the central end of the roller on operating side, punch it out from the bearing and take out from the underside. Reassembly all the parts as per the reverse bearing and take out from the underside.

圖十九 A

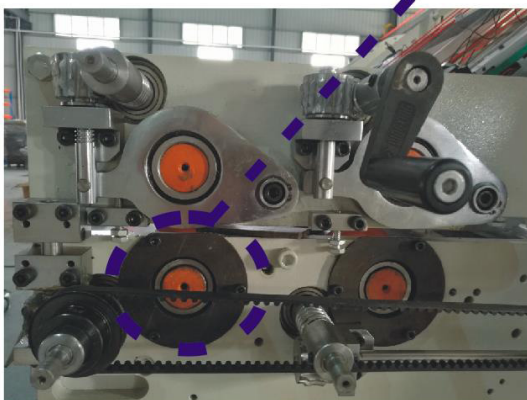


Fig. 19/A

B 圖二十

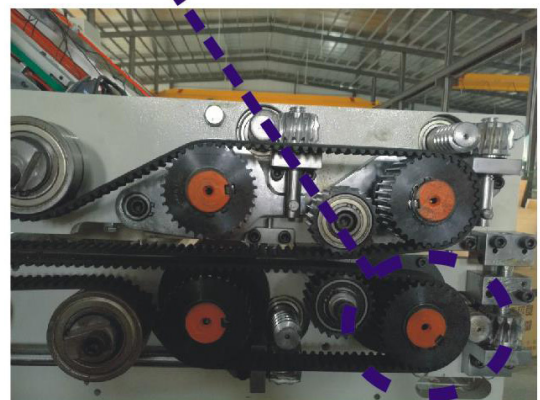


Fig. 20/B

Chapter 12: MAINTENANCE

8. Maintenance

8.1 Paper Suction System

8.1.1 Vacuum Suction Device

Thoroughly clean the interior on a regular basis to keep paper suction smooth. Remove the fixed nuts (8-1) and lift them to take out vacuum suction device. Remove another fixed nuts (8-2) and lift them to clean the interior of suction cylinder (Oiling is strictly prohibited).

8.1.2 Cam

Cam mechanism of suction & feeding unit is composed of two cams: prop cam (8-3) and nozzle cam (8-4). Guarantee no foreign matter in the groove of cams, thoroughly clean and oil the cams weekly so as to assure smooth running and longer service life of the bearings.

8.1.3 O Ring

Lubricate the upper and bottom rings of nozzle (8-5) prop cam monthly to assure smooth running of the rocker arm.

8.2 Air Pump

Clean the air filter on regular basis and check carbon vanes. If any damage, please replace as per Operation Manual to extend service life.

8.3 Elevating Chain

Oil elevating chain #50 on a regular basis to prevent chain from rusting and to prolong its service life. After oiling, wipe clean the chain to prevent dirt, which may affect the function of chain.

8.4 Reducer

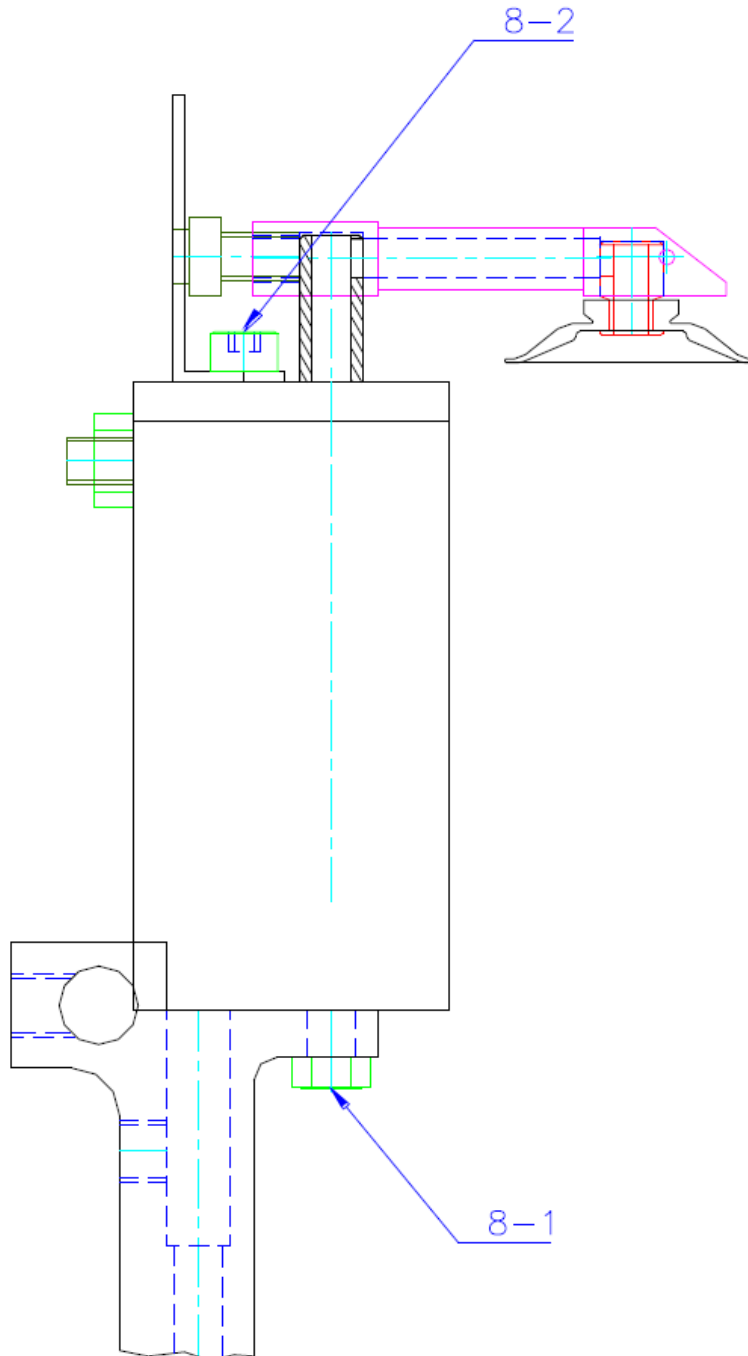
It has oil draining hole and oil filling hole. All oil should be drained out and replace with new oil after running first 100 hours. The oil should be replaced after every 2500 hours after. CPC Engine Oil # HD-220 or Mobil # Gear 630 is recommended.

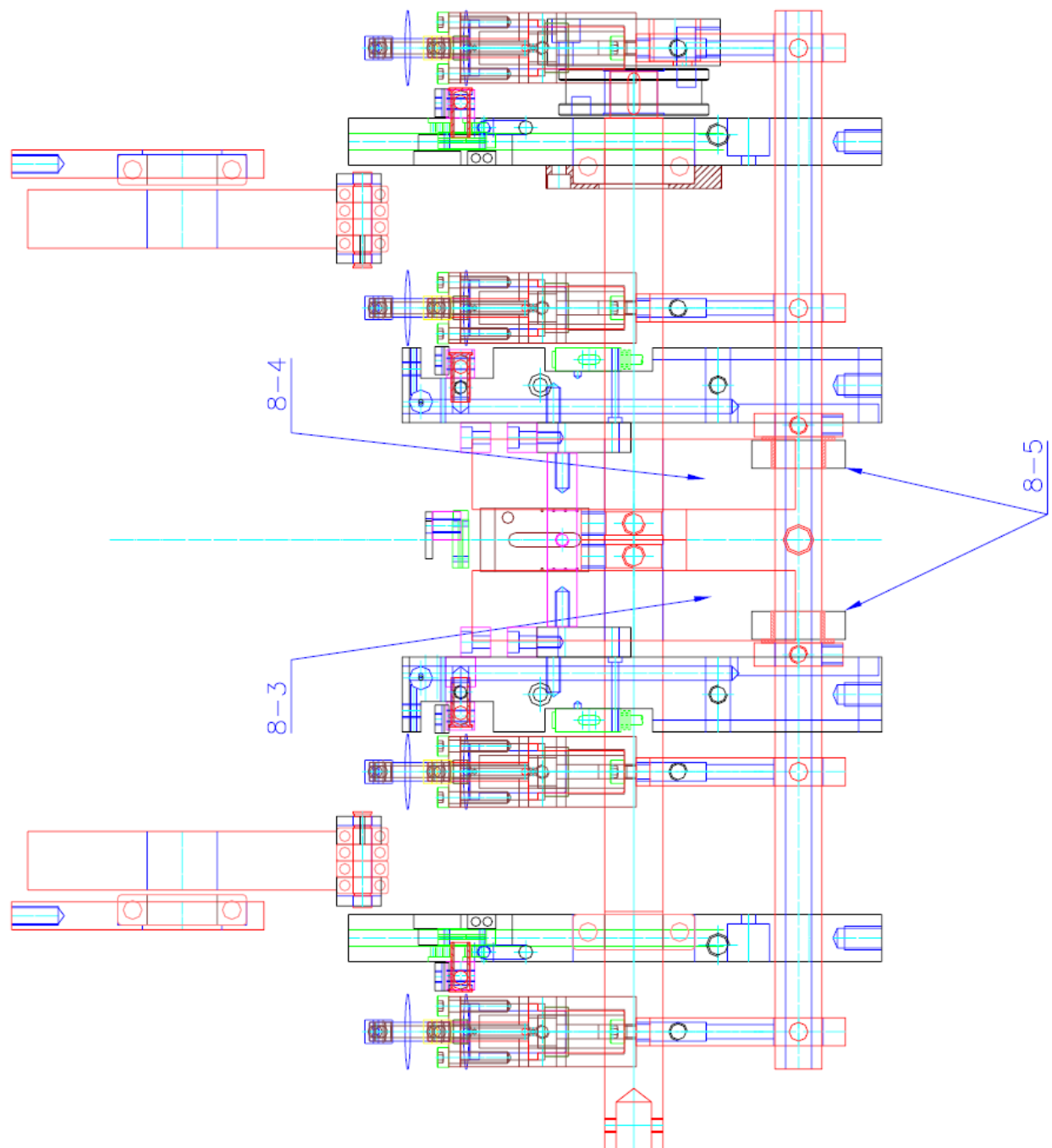
8.5 Detecting Sensors

Aligning System (5.1.1/A&B) has four detecting sensors, in which two are detecting the upper paper, another two are put in one stainless steel pipe to detect the bottom paper. These sensors are easily dusted by glue marks and dirt. Clean them thoroughly and frequently to keep working any time.

8.6 Cleaning

After each production, clean daily the gluing rollers, copper plates, water level sensing plate, draining tank or glue marks in the water tank. When cleaning the gluing rollers, remaining glue shall be used up or drained to glue bucket, then adjust the clearance of glue adjusting rollers to the minimum and fill clean water to clean the rollers, the next step is to set the clearance to maximum to drain out water. Clean the gluing rollers repeatedly as per the above steps for thorough cleaning. Meanwhile, copper plate, water level sensing plate and water tank shall be also properly cleaned in order to keep their smooth running.





Chapter 13: CAUTIONS

9. CAUTIONS

- 9.1 Check if all guards and parts have been properly tightened or fixed prior to running.
- 9.2 Guarantee no foreign matter between gears to assure normal running.
- 9.3 Never touch any running parts, such as: rollers, belts, gears, chains, airheads, etc.
- 9.4 Humidity in electric control cabinet shall be prohibited in order to prevent short circuit or damage to electric parts.
- 9.5 The hole for ventilating fan in control cabinet shall be kept open to ensure smooth ventilation. Ensure that the machine and its surrounding area is clean and tidy.
- 9.6 Debris and personnel should be prohibited beneath elevating platform of paper feeder/delivery unit.
- 9.7 PH value of glue should be mixed to neutral (pH 6-8) to extend service life of gluing rollers. After gluing, no any thread-like or fog-like matter shall be found on paper tail in order to assure good laminating quality.
- 9.8 Check laminating accuracy, gluing thickness and evenness, and also check if there is any irregular gluing on bottom paper. If so, please take an action to solve it.
- 9.9 If laminating sheets are not delivered smoothly, check if there is any irregular or excessive gluing on paper or if grain of paper is not appropriate.
- 9.10 Please replace the red rubber belt if it is too loose or broken.
- 9.11 Do not disassemble motor, gearbox reducer and servo motor without authorization. In case of any defect, please contact us as soon as possible.
- 9.12 Do not idle run glue pump in order to extend service life of the interior air cylinder.
- 9.13 Clean the air filter of air pump and check carbon brush on regular basis. If carbon brush is broken, please replace according to Maintenance Manual in order to assure service life of air pump.
- 9.14 Aligning System has four detecting sensors (5.1.1/A&B) which is very important for ensuring laminating accuracy. Please check and clean if any sensors are stained with glue debris or foreign matter.
- 9.15 Don't climb the machine when it is running.

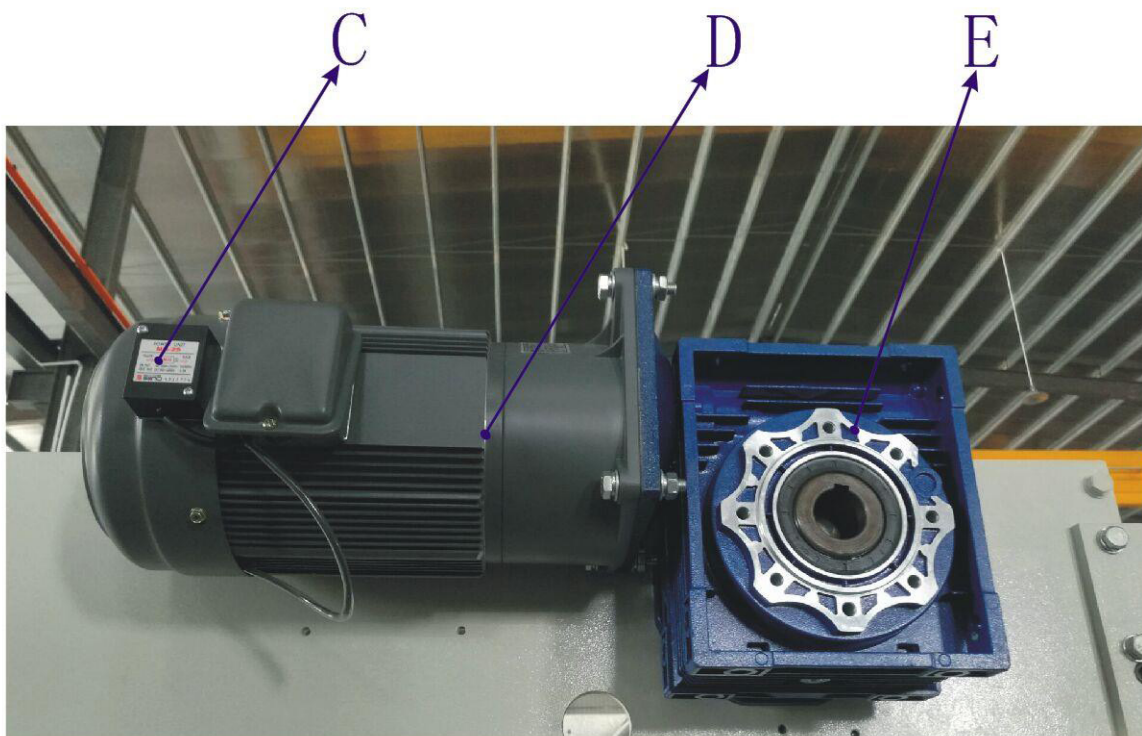
Chapter 14:

LIST & LAYOUT OF PARTS

10. LIST & LAYOUT OF PARTS

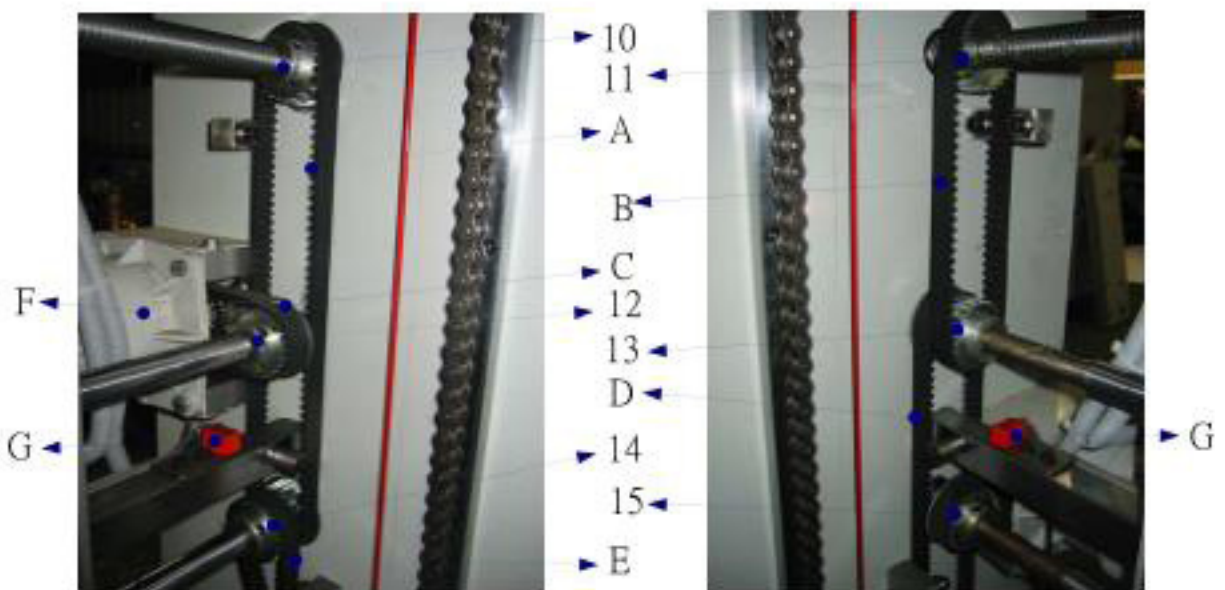
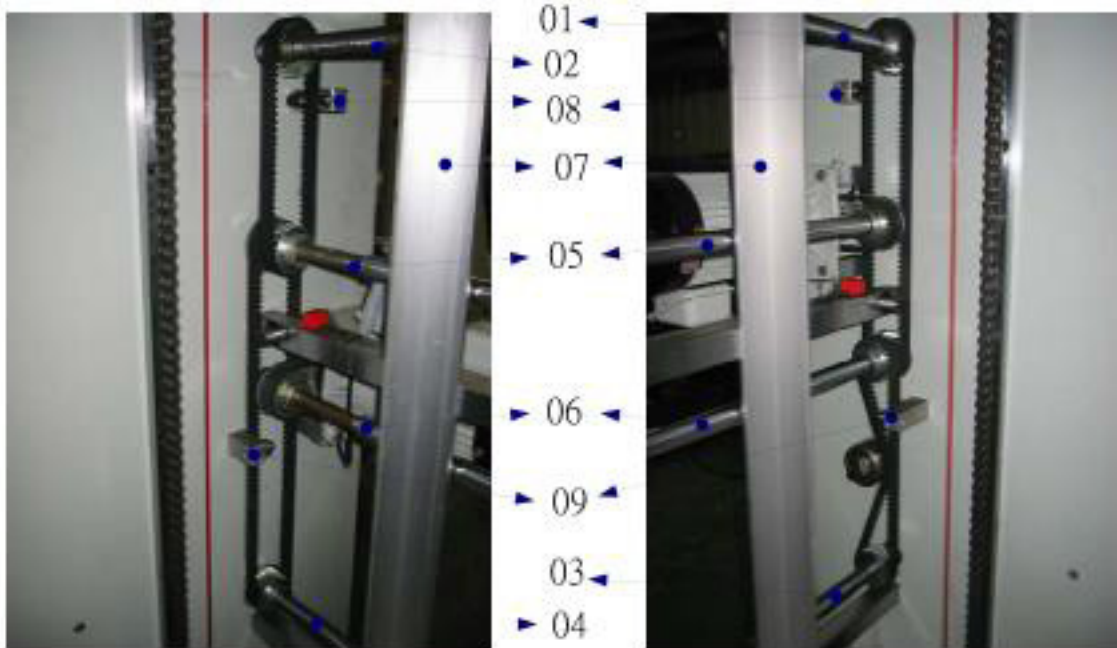
10.1 Upper Feeder Elevating Device

Assembly No.	Part No.	Name
0101.	5L9QNX	Elevating Shaft
0102.	8PPYFD	Elevating Shaft Chain Gear
0103.	4U45FD	Elevating Press Chain
0104.	3MF0FD	Elevating Vertical Chain
0105.	13C6FD	Elevating Bottom Stand
0106.	4F51NX	Elevating Limit Base
0107.	8LLIFD	Elevating Motor Timer Pulley
0108.	8TLAFD	Elevating Timer Pulley
01-A.	50#	Linear Chain
01-B.	625-8YU-30	Feeder Timing Belt
01-C.	PL-08N	Limited Switch
01-D.	1LA 7096-4AA10	Servo Motor
01-E.	LK-VOF BO100*60	Gearbox Reducer



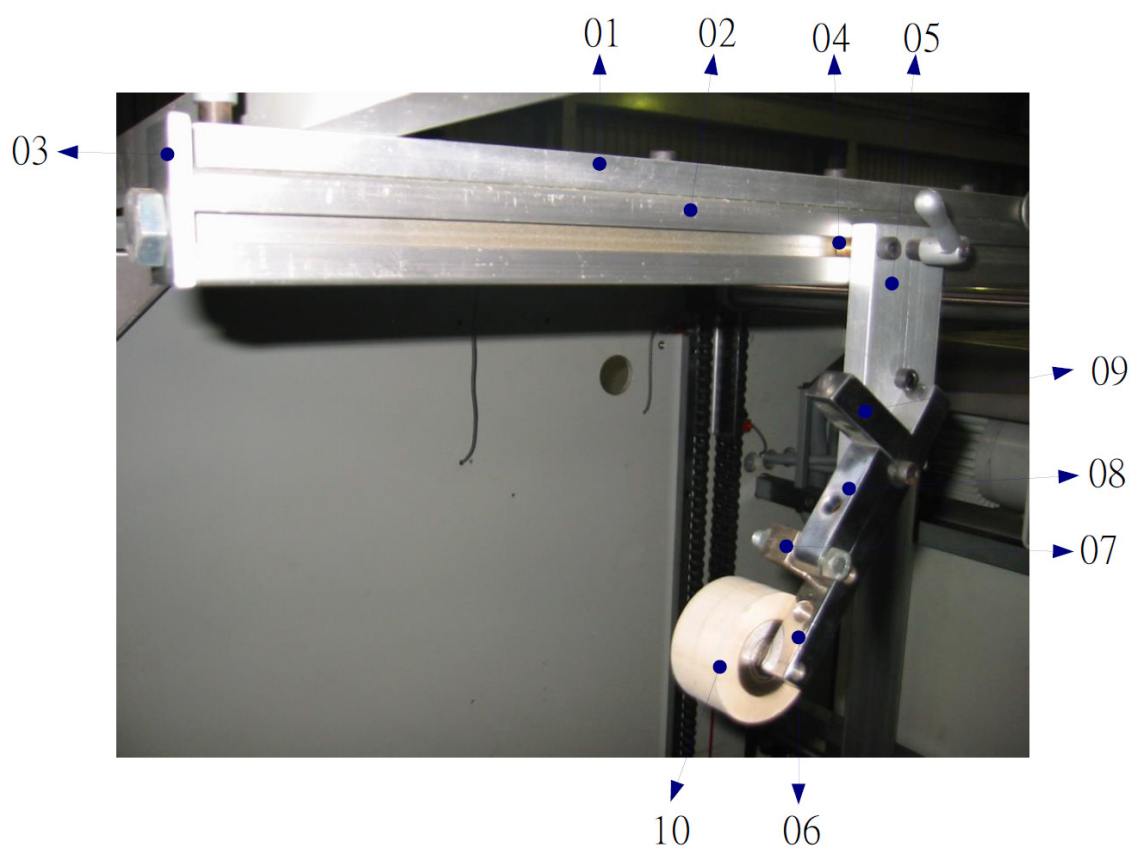
10.2 Upper Feeder Width Adjusting Unit

Assembly No.	Part No.	Name
0201.	9FM7FE	Side Stop Threaded Shaft
0202.	9FM9FE	Side Stop Threaded Shaft
0203.	9FM9FE	Side Stop Threaded Shaft
0204.	9FM7FE	Side Stop Threaded Shaft
0205.	5FX6FE	Width Adjusting Shaft
0206.	5FX7FE	Width Adjusting Shaft
0207.	3MX9FE	Upper F-Type Side Stopper
0208.	4F69FE	Width Adjusting Bearing Cover
0209.	4F48FE	Width Adjusting Bearing Cover
0210.	8NLCFE	Paper Width Adjusting Gear
0211.	8NLAFE	Paper Width Adjusting Gear
0212.	8NLBFE	Paper Width Adjusting Motor Gear
0213.	8NNCFE	Paper Width Adjusting Double-row Gear
0214.	8NNCFE	Width Adjusting Double-row Gear
0215.	8NLBFE	Feeder Width Adjusting Motor Gear
02-A.	1000-8M-20	Timer Belt
02-B.	640-8M-20	Timer Belt
02-C.	416-8M-20	Timer Belt
02-D.	1184-8M-20	Timer Belt
02-E.	840-8M-20	Timer Belt
02-F.	SV-A10	Servo Motor
02-G.	PL-08N	Limit Switch



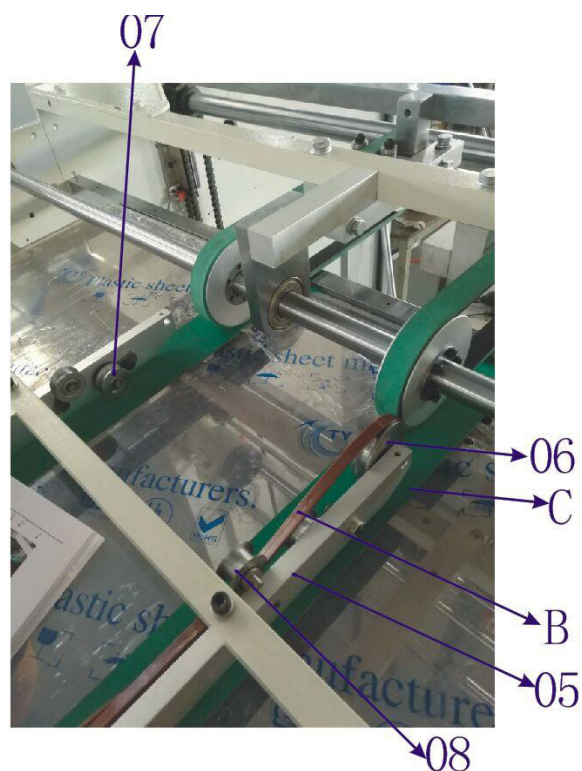
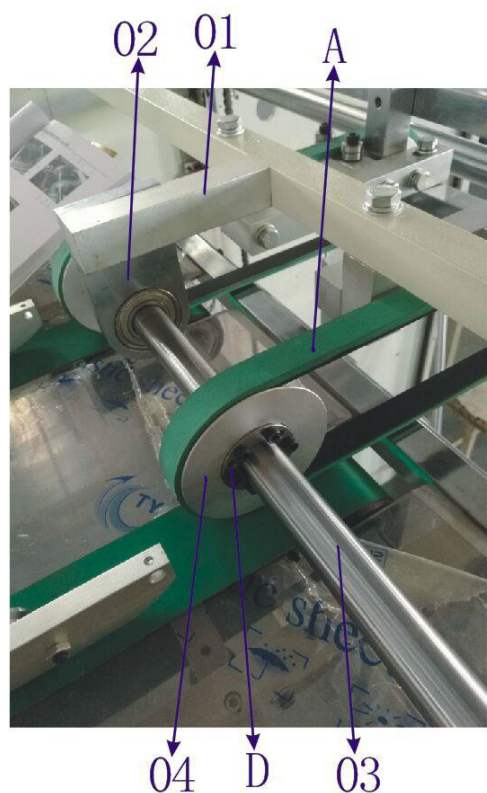
10.3 Upper Feeder Press Unit

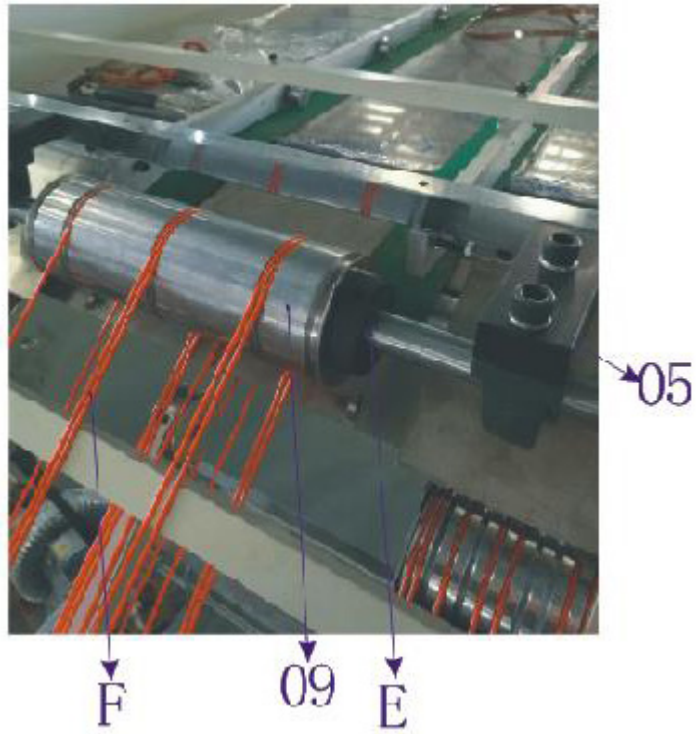
Assembly No.	Part No.	Name
0301.	2BR9FF	Sliding Rail Base
0302.	4JM0FF	Sliding Rail
0303.	2651FF	Front Plate
0304.	7B08FF	Sliding Rod
0305.	2BB2FF	LS Stand
0306.	4CCKFF	Trolley Bracket
0307.	4C3BFF	Paper Pressing Stand
0308.	4C62FF	Paper Pressing Base
0309.	4C5FFF	Paper Pressing Rod
0310.	6N15FF	Stop Trolley



10.4 Upper Paper Conveying Bridge

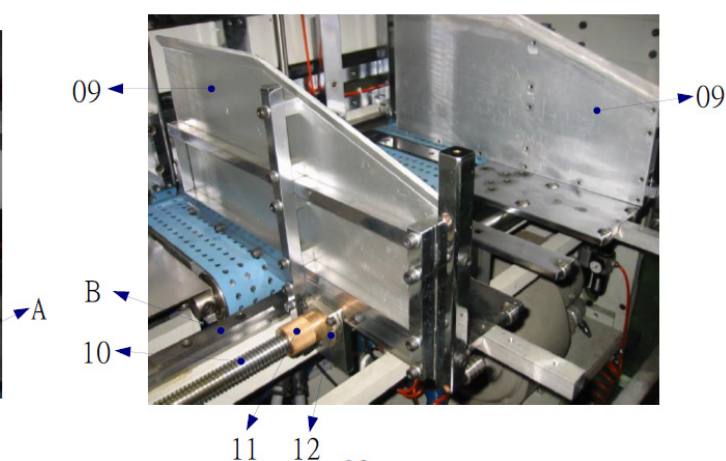
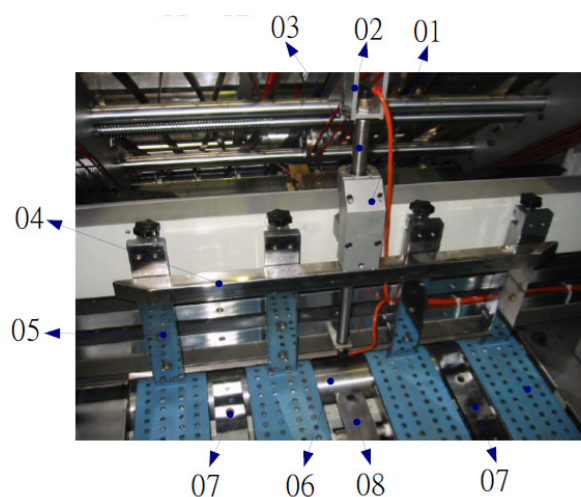
Assembly No.	Part No.	Name
0401.	4HB5FC	Paper Feeding Roller Bearing Cover
0402.	1DB4FC	Paper Feeding Roller Stop Plate
0403.	5GX6FC	Bridge Wheel Shaft
0404.	6S31FC	Paper Conveying Wheel
0405.	2CX5BF	Paper Bridge Wheel Bracket
0406.	6N16BF	Paper Bridge Pressing Wheel
0407.	6K15BF	Upper Pressing Wheel
0408.	6J15BF	Belt Guide Wheel
0409.	5S16BF	Belt Roller
04-A.	A-NR980 25W×980L	Paper Conveying Belt
04-B.	VL-10	V Belt
04-C.	75×4760	Transmission Belt
04-D.	SE30	Bush
04-E.	UCPA204	Bearing
04-F.	RM-4	Red Belt





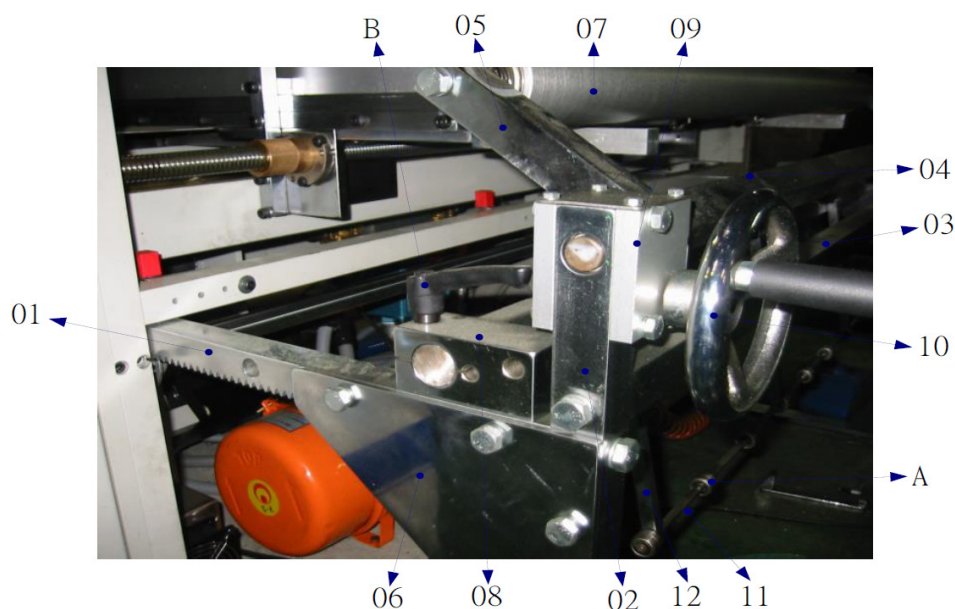
10.5 Bottom Paper Feeder

Assembly No.	Part No.	Name
0501.	4KB3DF	Bottom Paper Base
0502.	26A2DF	Rod-free Cylinder Side Base
0503.	M/46016/300	Rod-free Cylinder
0504.	4GP0DF	Paper Press Plate
0505.	1DG0DC	Front Paper Stop Plate
0506.	5SP4DC	Belt Transmission Roller
0507.	2BE4DC	Front Stop Plate
0508.	2BM9DC	Middle Supporting Plate
0509.	16K9DE	Width Adjusting Side Plate
0510.	9FX0DE	Width Adjusting Thread
0511.	9L80DE	Width Adjusting Threaded Shaft
0512.	7P12DE	Width Adjusting Copper Bush
05-A.	T4*120*840	Cell Belt
05-B.	LGH35	Linear Rail



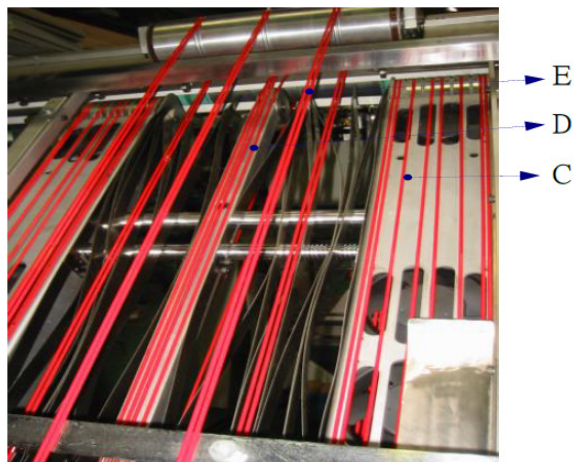
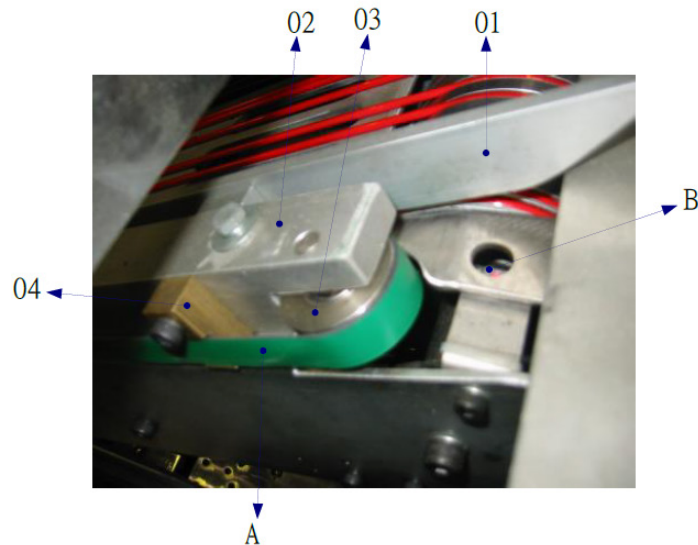
10.6 Paper Support Stand

Assembly No.	Part No.	Name
0601.	9HX6DD	Paper Tail Moving Tooth Bar
0602.	4HNFDD	Paper Tail Vertical Stand
0603.	4HW6DD	Cross Tooth Horizontal Bar
0604.	4HW5DD	Worm-wheel Shaft
0605.	4HC5DD	Paper Tail Lock Block
0606.	16D0DD	Tooth Bar Bracket
0607.	5PU2DD	Paper Tail Pipe
0608.	1LA0DD	Paper Support Moving Shaft Base
0609.	1B75DD	Paper Tail Worm-wheel Locking Plate
0610.	----	Paper Support Rocker Arm
0611.	78T1DD	Paper Support Bearing Shaft
0612.	4BF5DD	Paper Support Bearing Bar
06-A.	608ZZ	Bearing
06-B.	M10×35	Adjusting Handle



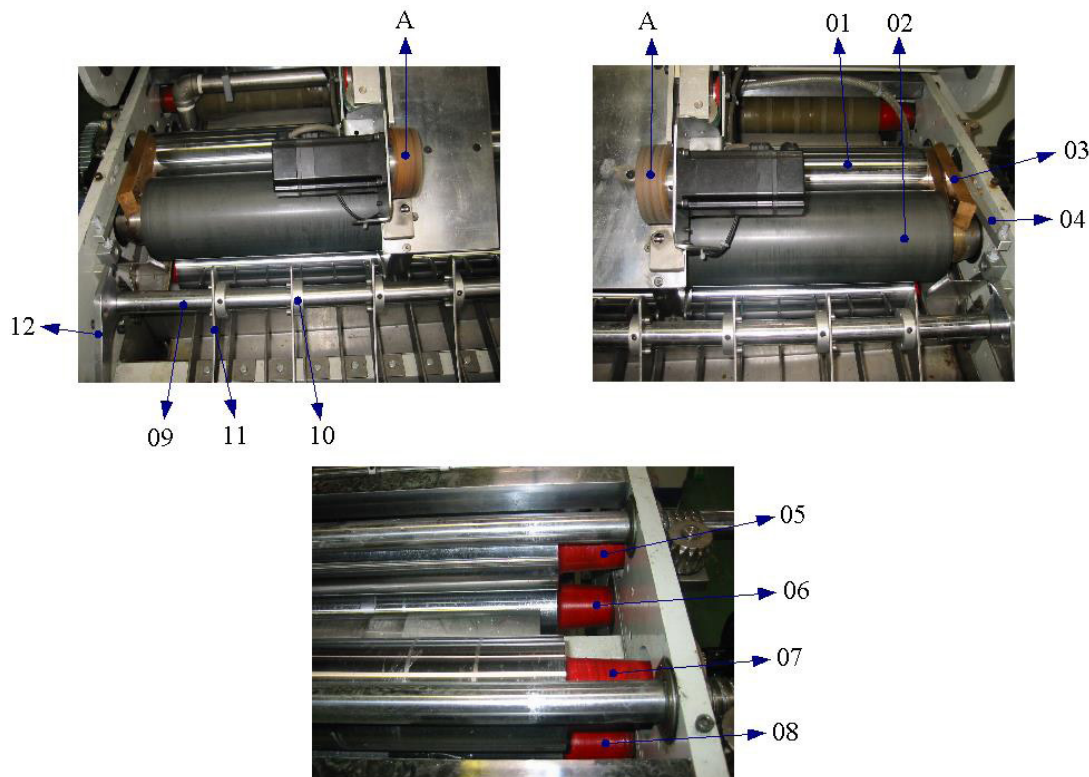
10.7 Aligning Mechanism

Assembly No.	Part No.	Name
0701.	26W2LD	Side Stop Paper Press Plate
0702.	4HU2LD	Up Side Stopper
0703.	6K17LD	Side Stop Tail Wheel
0704.	4B3BLC	Side Stop Tail Guide Block
07-A.	15W×2800L	Side Stopper Belt
07-B.	E3-TL21	Photo Cell
07-C.	RM-4-2685	Aligning Transmission Side Belt
07-D.	RM-4-2840	Aligning Transmission Mid Belt
07-E.	RM-4-3340	Aligning Transmission Press Belt



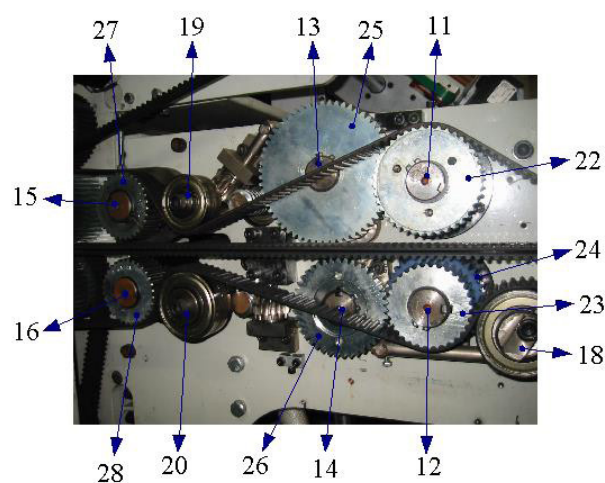
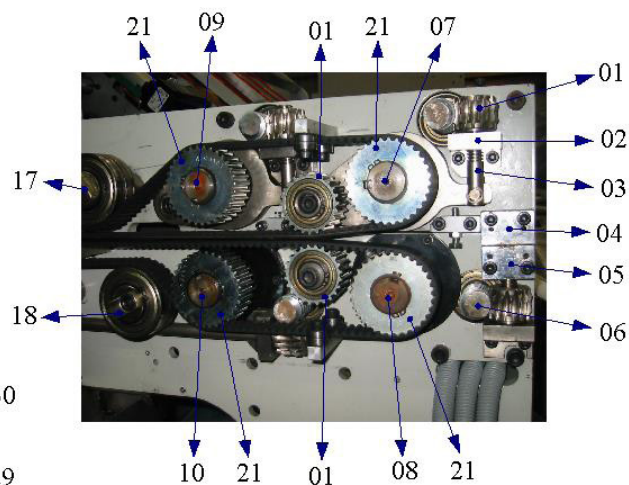
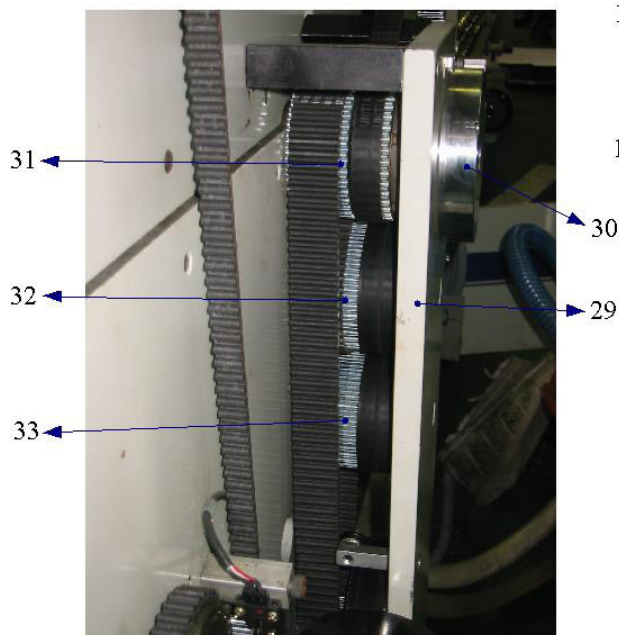
10.8 Main Machine

Assembly No.	Part No.	Name
0801.	5SX5GC	Glue Adjusting Roller
0802.	5UX5GC	Glue Attaching Roller
0803.	0GC6GF	Copper Stopper
0804.	4BCFGF	Copper Stopper Holder
0805.	5SX9GC	Laminating Upper Roller
0806.	5SX8GC	Laminating Down Roller
0807.	5SX9GC	Upper Press Roller
0808.	5SX8GC	Bottom Press Roller
0809.	5GW4GF	Paper Support Bar
0810.	7L14GF	Paper Support Plate Holder
0811.	13B9GF	Upper Press Paper Blade
0812.	1AB8GF	Press Paper Side Plate
08-A.	6Q31LC	Servo Motor Compensation Rubber Trolley



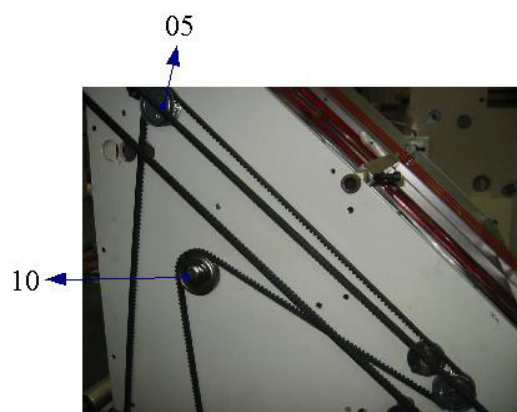
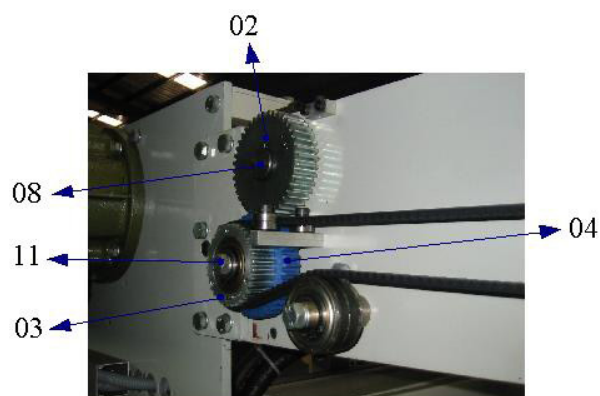
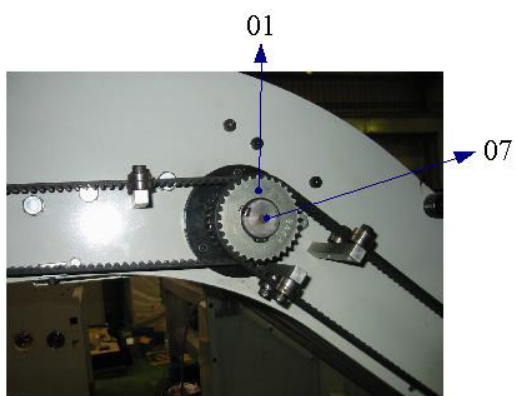
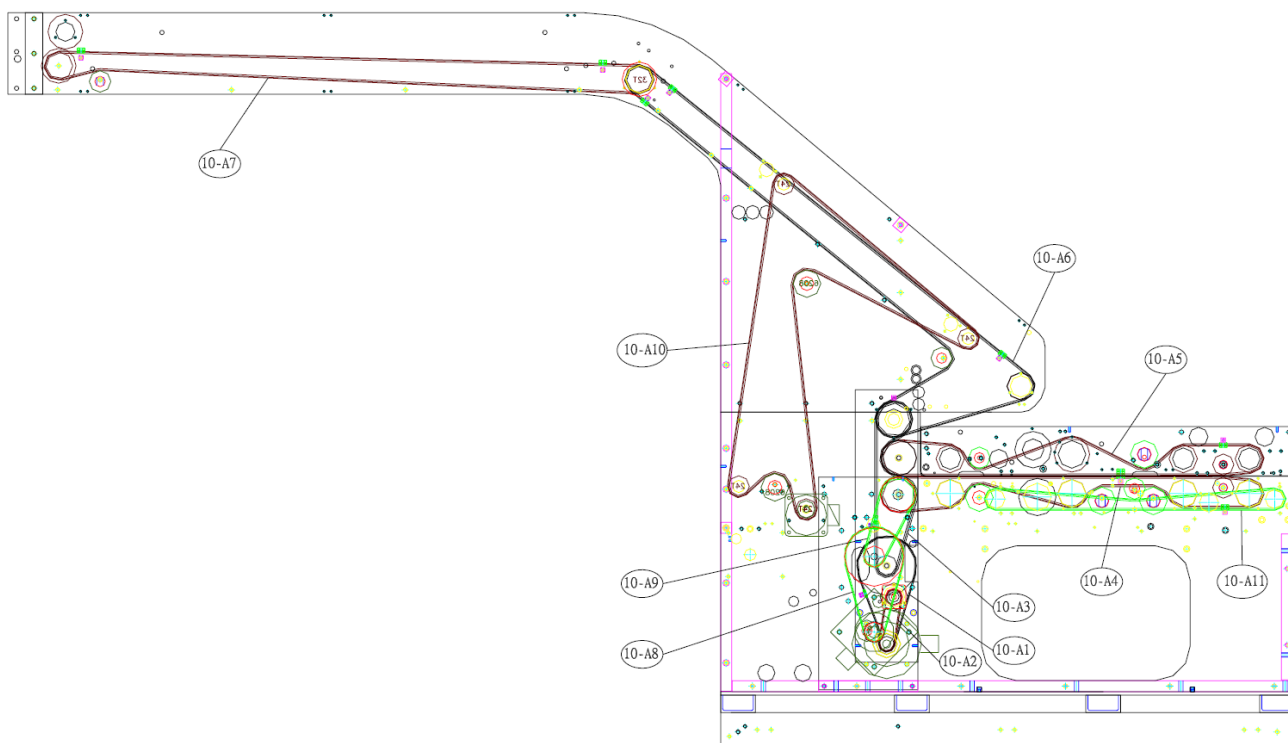
10.9 Gearbox

Assembly No.	Part No.	Name
0901.	5SX5GC	Glue Adjusting Roller
0902.	5UX5GC	Glue Attaching Roller
0903.	0GC6GF	Copper Stopper
0904.	4BCFGF	Copper Stopper Holder
0905.	5SX9GC	Laminating Upper Roller
0906.	5SX8GC	Laminating Down Roller
0907.	5SX9GC	Upper Press Roller
0908.	5SX8GC	Bottom Press Roller
0909.	5GW4GF	Paper Support Bar
0910.	7L14GF	Paper Support Plate Holder
0911.	13B9GF	Upper Press Paper Blade
0912.	1AB8GF	Press Paper Side Plate
0913.	6Q31LC	Servo Motor Compensation Rubber Trolley
0914.	5UX5GC	Glue Attaching Roller
0915.	0GC6GF	Copper Stopper
0916.	4BCFGF	Copper Stopper Holder
0917.	5SX9GC	Laminating Upper Roller
0918.	5SX8GC	Laminating Down Roller
0919.	5SX9GC	Upper Press Roller
0920.	5SX8GC	Bottom Press Roller
0921.	5GW4GF	Paper Support Bar
0922.	7L14GF	Paper Support Plate Holder
0923.	13B9GF	Upper Press Paper Blade
0924.	1AB8GF	Press Paper Side Plate
0925.	6Q31LC	Servo Motor Compensation Rubber Trolley
0926.	5SX8GC	Bottom Press Roller
0927.	5GW4GF	Paper Support Bar
0928.	7L14GF	Paper Support Plate Holder
0929.	13B9GF	Upper Press Paper Blade
0930.	1AB8GF	Press Paper Side Plate
0931.	5GW4GF	Paper Support Bar
0932.	7L14GF	Paper Support Plate Holder
0933.	13B9GF	Upper Press Paper Blade



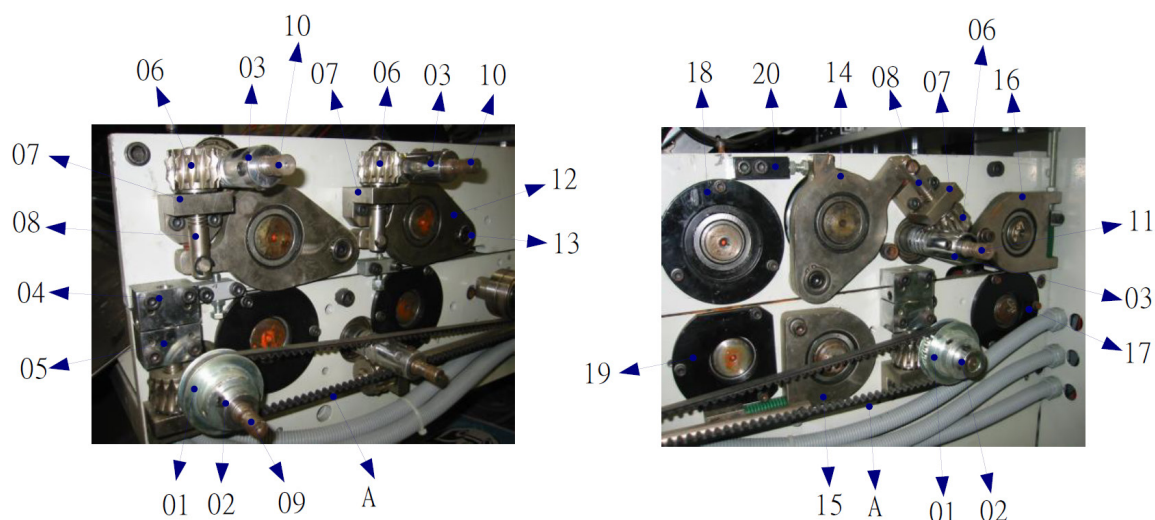
10.10 Belt Set

Assembly No.	Part No.	Name
1001.	8QFBBT	Front Roller Belt Pulley for Paper Bridge
1002.	8SF6BT	Tail Roller Belt Pulley for Paper Bridge
1003.	8QFCBT	Belt Pulley for Paper Bridge
1004.	8SF5BT	Idle Roller Belt Pulley for Paper Bridge
1005.	8NEBDE	Width Adjusting Belt Pulley for Main Machine
1006.	8NEALE	Width Adjusting Motor Belt Pulley
1007.	5SX0BC	Front Belt Roller for Paper Bridge
1008.	5GX6FC	Tail Roller Shaft for Paper Bridge
1009.	7L37LE	Transmission Bearing Shaft
1010.	7L34LE	Transmission Bearing Shaft
1011.	7G60BT	Transmission Bearing Shaft



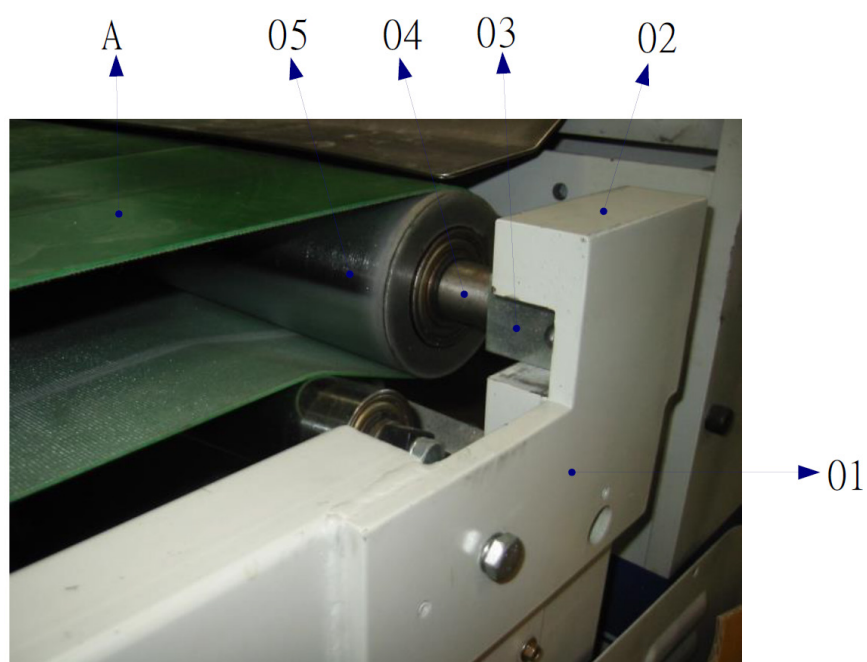
10.11 Rollers Clearance Adjusting

Assembly No.	Part No.	Name
1101.	8N3BGE	Synchronous Height-adjusting Belt Pulley
1102.	9G94GE	Synchronous Height-adjusting Worm Shaft
1103.	9G84GD	Height-adjusting Worm Shaft
1104.	4H5AGE	Thread Block
1105.	4H5BGE	Thread Block
1106.	9L37GD	Height Adjusting Worm Shaft
1107.	1L48GD	Clearance Adjusting Base
1108.	9CA1GD	Clearance Adjusting Thread
1109.	9GX6GE	Synchronous Height Adjusting Worm Shaft
1110.	9GX7GD	Height Adjusting Worm Shaft
1111.	9GX7GD	Height Adjusting Worm Shaft for Glue Adjusting Roller
1112.	1CD6GC	Laminating Roller Rocker Arm
1113.	7F30GC	Clearance Adjusting Shaft
1114.	1CD4GC	Rocker Arm of Glue Adjusting Roller
1115.	1CD9GC	Rocker Arm of Rubber Water Roller
1116.	1CD8GC	Rocker Arm of Feeding Upper Roller
1117.	16A0GC	Bearing Cover of Feeding Roller
1118.	16A3GC	Bearing Cover of Glue Attaching Roller
1119.	16A2GC	Bearing Cover of Bottom Glue Roller
1120.	4D50GC	Rocker Arm Block
11-A.	8M-10W-1800	Timer Belt



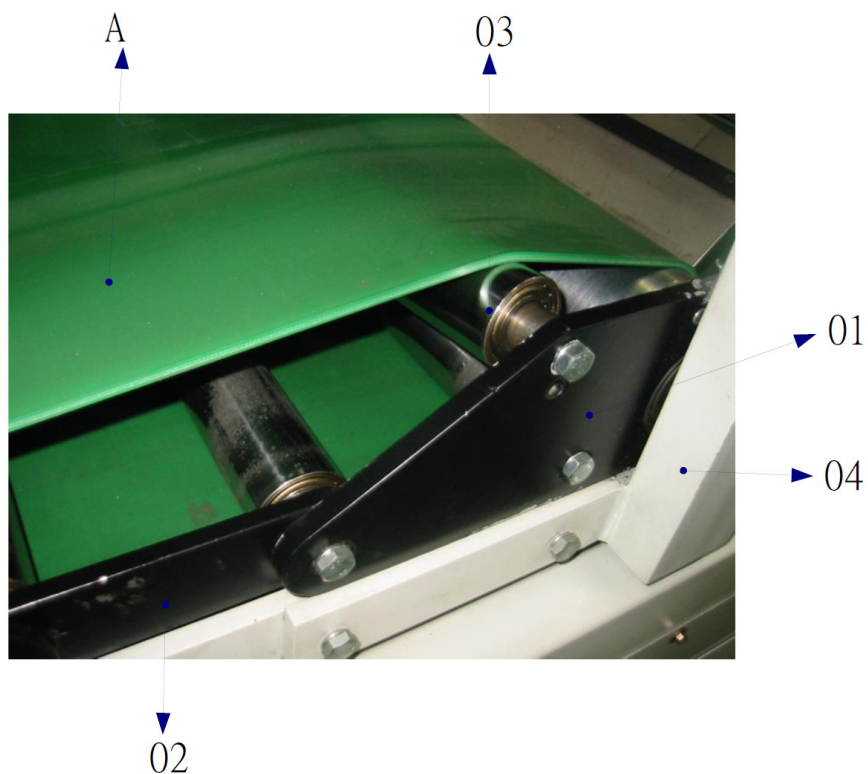
10.12 Adjusting Pressing Conveyor

Assembly No.	Part No.	Name
1201.	1BE0CB	Press Tail Roller Side Board
1202.	4HA0CB	Press Tail Roller Block
1203.	4K48CD	Interval Adjusting Block
1204.	5HX8CD	Tail Roller Shaft
1205.	5SV8CD	Tail Roller
12-A.	2mm 1500W×13160L	Conveyer Belt



10.13 Side Plate of Pressing Conveyor

Assembly No.	Part No.	Name
1301.	1BL5CE	Front Side Plate
1302.	1AD2CE	Upper Press Roller Side Plate
1303.	5MD2CD	Upper Conveyor Guide Roller
1304.	3PL6CE	Front Frame of Press Roller
13-A.	3mm 1500W×13160L	Pressing Conveyor Belt



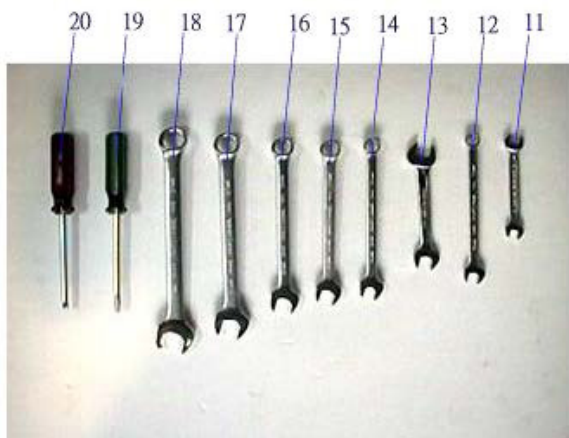
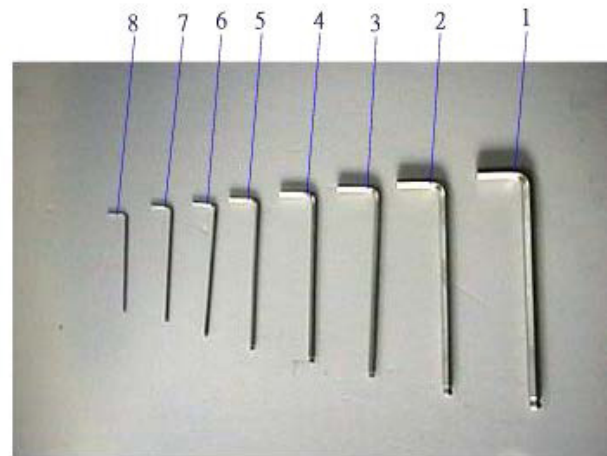
10.14 List of Consumable Parts

Assembly No.	Part No.	Name
10-A1	810-5M-30	Timer Belt for Main Motor
10-A2	410-5M-10	Timer Belt for Encoder
10-A3	1200-D8M-35	Transmission Timer Belt for Rollers
10-A4	2400-8M-30	Timer Belt for Bottom Rollers
10-A5	2400-8M-30	Timer Belt for Upper Rollers
10-A6	3600-8M-20	Timer Belt for Aligning Rollers
10-A7	3600-8M-20	Transmission Timer Belt for Paper Bridge
10-A8	810-5M-50	Timer Belt for Bottom Paper Motor
10-A9	640-8M-100	Transmission Timer Belt for Bottom Paper
01-B	625-8M-30	Timer Belt for Feeding Elevator
10-A10	3360-8M-20	Width Adjusting Timer Belt
10-A11	1800-8M-10	Timer Belt for Rollers Clearance Adjusting

Chapter 15: LIST OF HARDWARE TOOLS

12. List of Hardware

Item	Specification	Name
1.	10mm	Inner Hex. Spanner (L type)
2.	8mm	Inner Hex. Spanner (L type)
3.	6mm	Inner Hex. Spanner (L type)
4.	5mm	Inner Hex. Spanner (L type)
5.	4mm	Inner Hex. Spanner (L type)
6.	3mm	Inner Hex. Spanner (L type)
7.	2.5mm	Inner Hex. Spanner (L type)
8.	2mm	Inner Hex. Spanner (L type)
9.	5mm	Inner Hex. Spanner (T type)
10.	3mm	Inner Hex. Spanner (T type)
11.	8×10mm	ABC Fixed Wrench
12.	10mm	Box Spanner
13.	12×14mm	ABC Fixed Wrench
14.	12mm	Box Spanner
15.	13mm	Box Spanner
16.	14mm	Box Spanner
17.	17mm	Box Spanner
18.	19mm	Box Spanner
19.	----	Slotted Screwdriver
20.	----	Phillips Screwdriver
21.	S	Ring Clamp for Shaft
22.	R	Ring Clamp for Hole
23.	6"	Pincher 6"
24.	8"	Pincher 8"
25.	12"	Monkey Wrench
26.	3.6m	Top Tape Measure



Chapter 16:

LAYOUT

Automatic Flute Laminator (Model No.: DX 2100)

WALL

WALL

WALL

WALL

DRIVE SIDE

OPERATION SIDE

FEEDER

DELIVERY

Press and convey section

Laminate Unit

Bridge

flute tank and water drain

Main Power 28kW 90A

2500

2500

2440

2964

1000

800

2900

1610

6520

1550

15080

2180

1450

1050

Note: All dimensions are in mm

DINGXING MACHINERY				LAYOUT			
Design	杨松斌	2020-07-06	 Third-angle projection	Drawing Size	A4	Scale	1:25
Reviewed				Quant.	1	A	4
Approved				Drawing No.: DX-2100L			

Automatic Flute Laminator (Model No.: DX 2100)

WALL

WALL

WALL

WALL

DRIVE SIDE

OPERATION SIDE

FEEDER

DELIVERY

Press and convey section

Laminate Unit

Bridge

flute tank and water drain

Main Power 220W 90A

2500

2440

2964

1000

2500

1500

1610

2900

1450

1050

2180

6520

15080

1550

Note: All dimensions are in mm

DINGXING MACHINERY				LAYOUT			
Design	杨松斌	2020-07-06		Drawing Scale	1:25	Quant.	1
Reviewed				Thick and thin		Revision	A
Approved				Material:		Drawing No.:	DX-2100L

Automatic Flute Laminator (Model No.: DX 2100)

WALL

WALL

WALL

WALL

DRIVE SIDE

OPERATION SIDE

FEEDER

DELIVERY

Press and convey section

Laminate Unit

Bridge

flute tank and water drain

Main Power 28kW 90A

2500

2440

2964

1000

2500

1500

1610

2900

1450

1050

2180

6520

15080

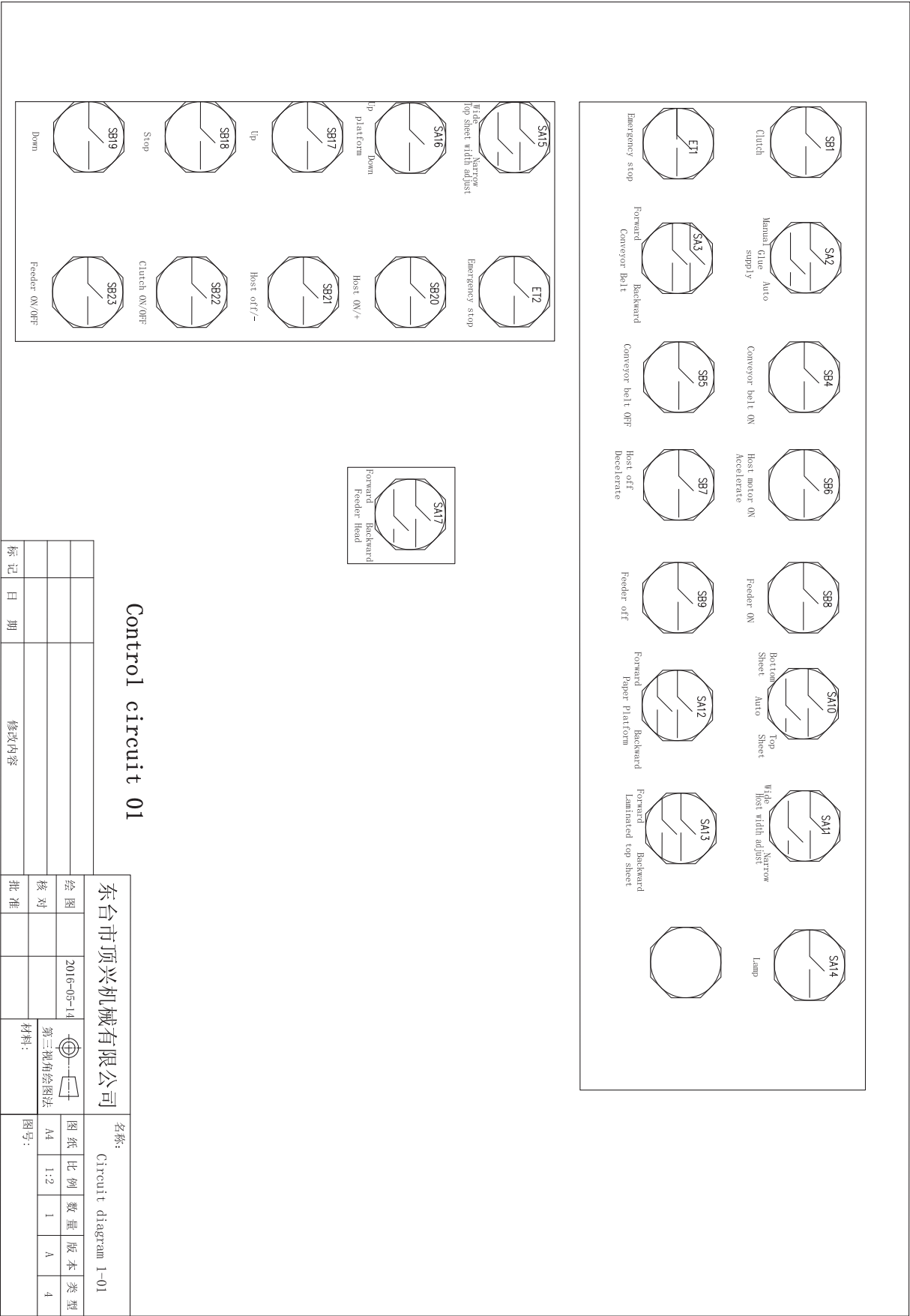
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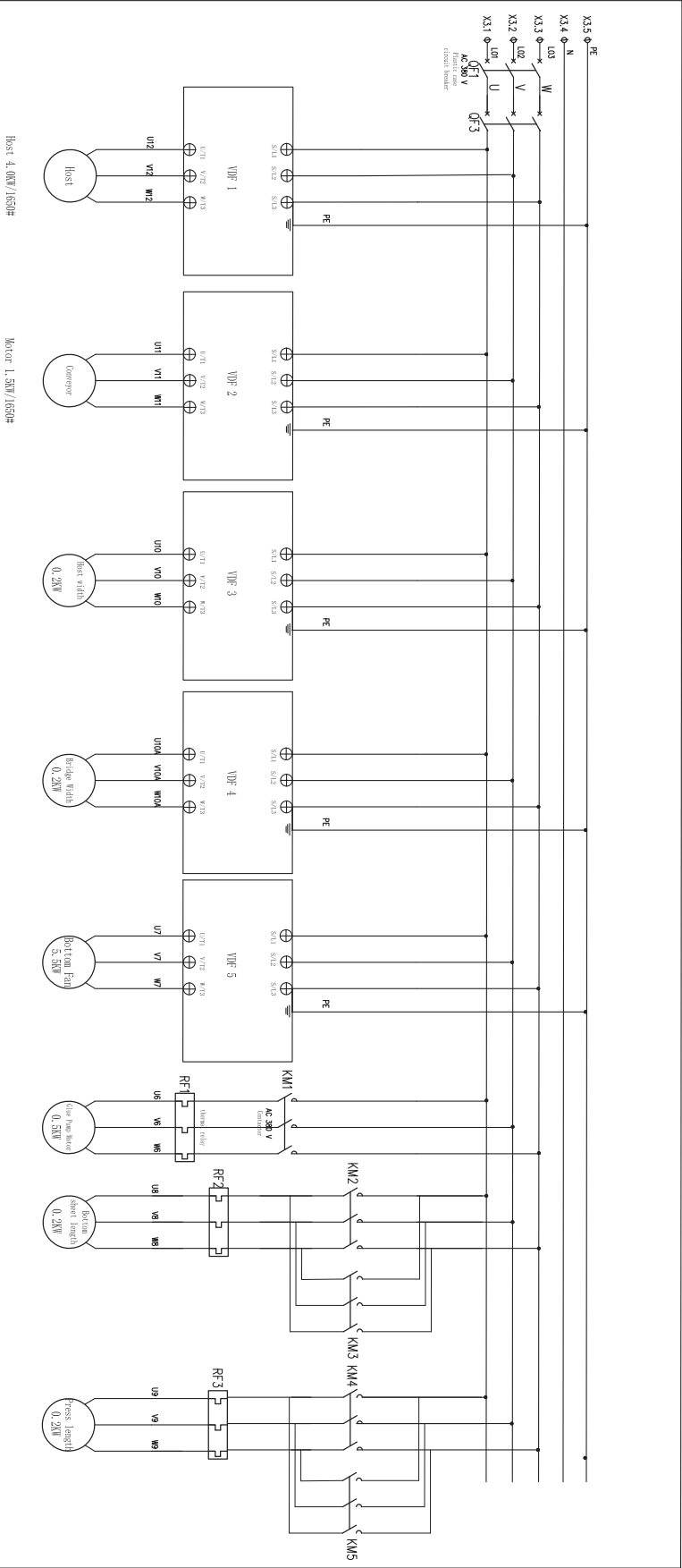
Note: All dimensions are in mm

DINGXING MACHINERY				LAYOUT			
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Reviewed				Thick and thin		Quant.	1
Approved				Material:		Drawing No.:	DX-2100L

Chapter 17:

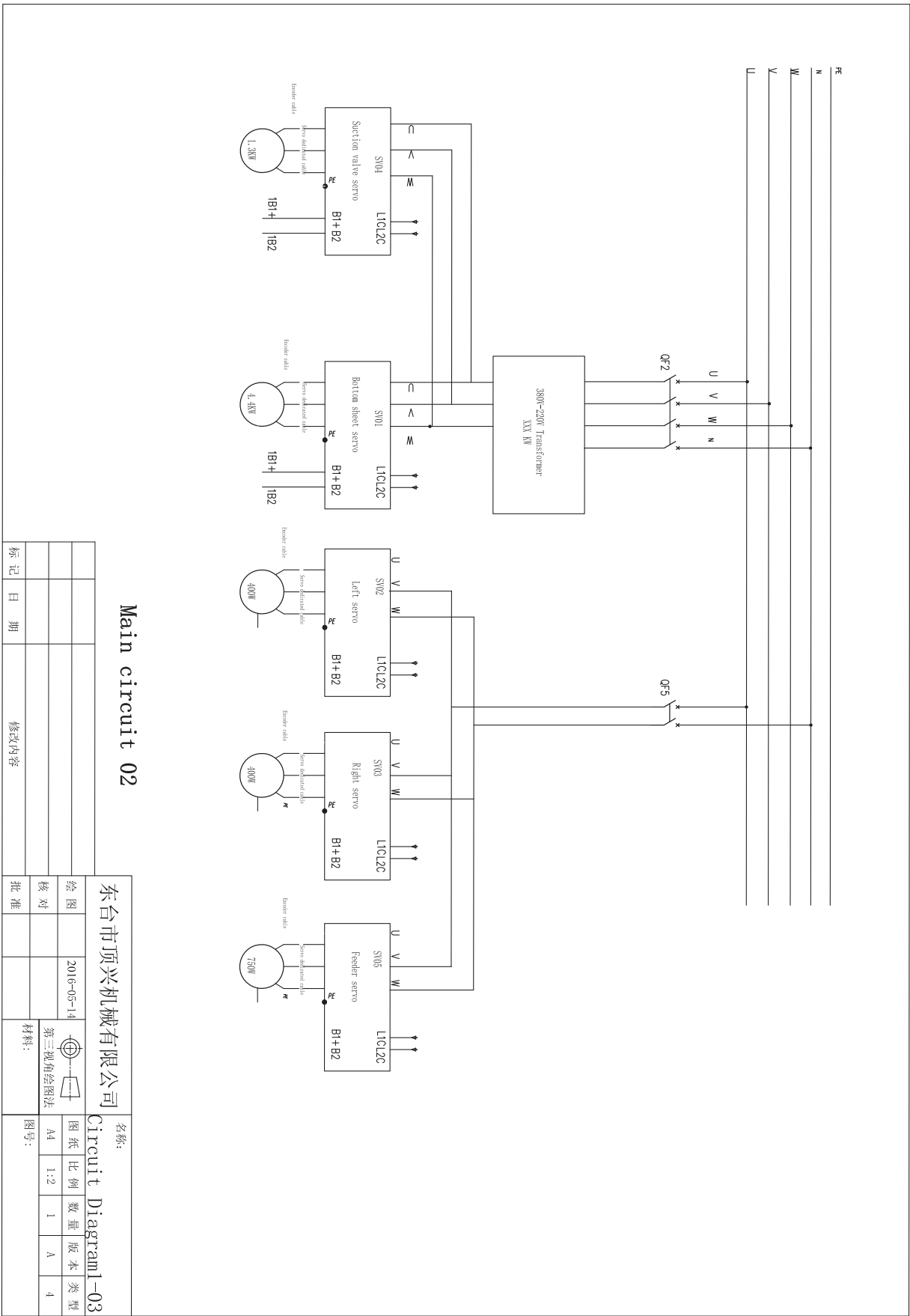
ELECTRICAL DIAGRAMS

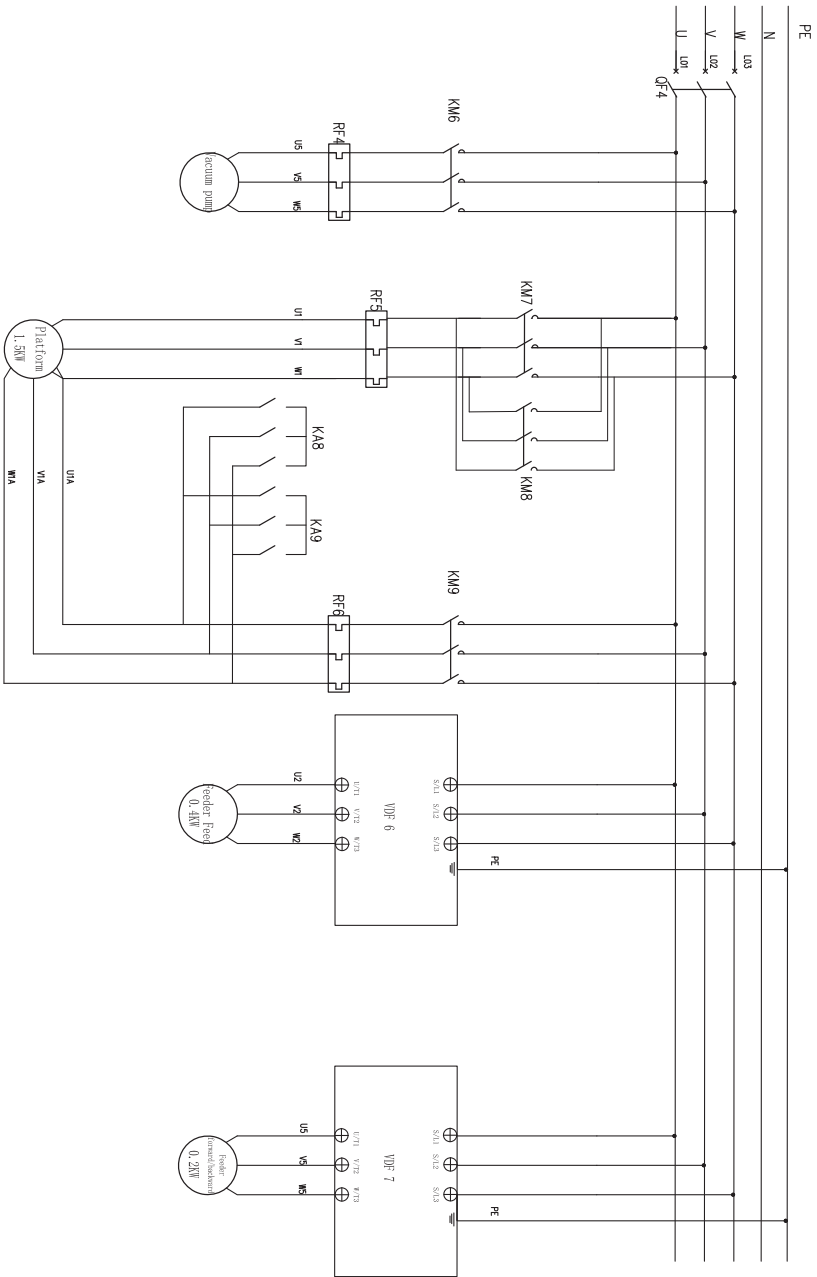




Main circuit 01

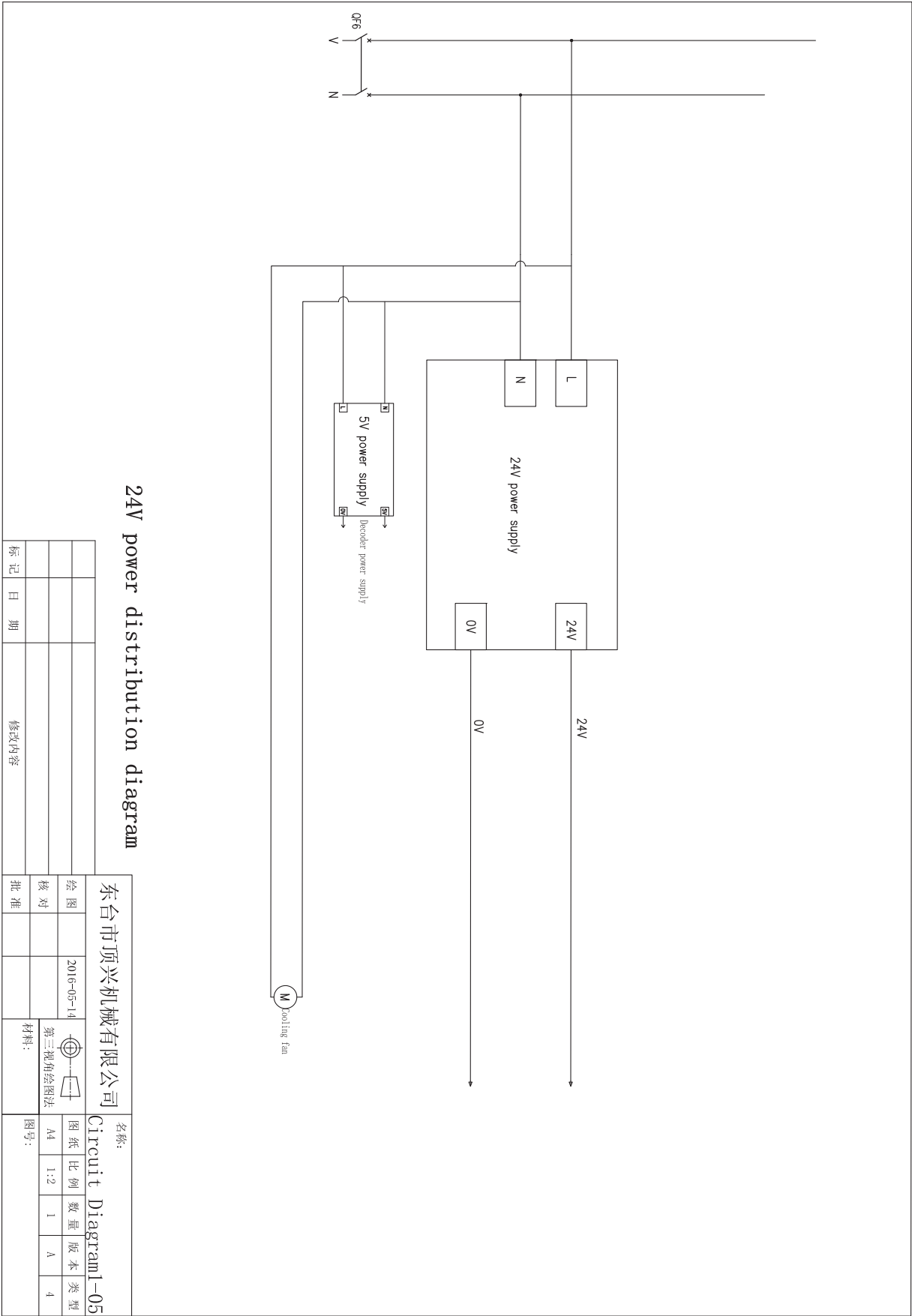
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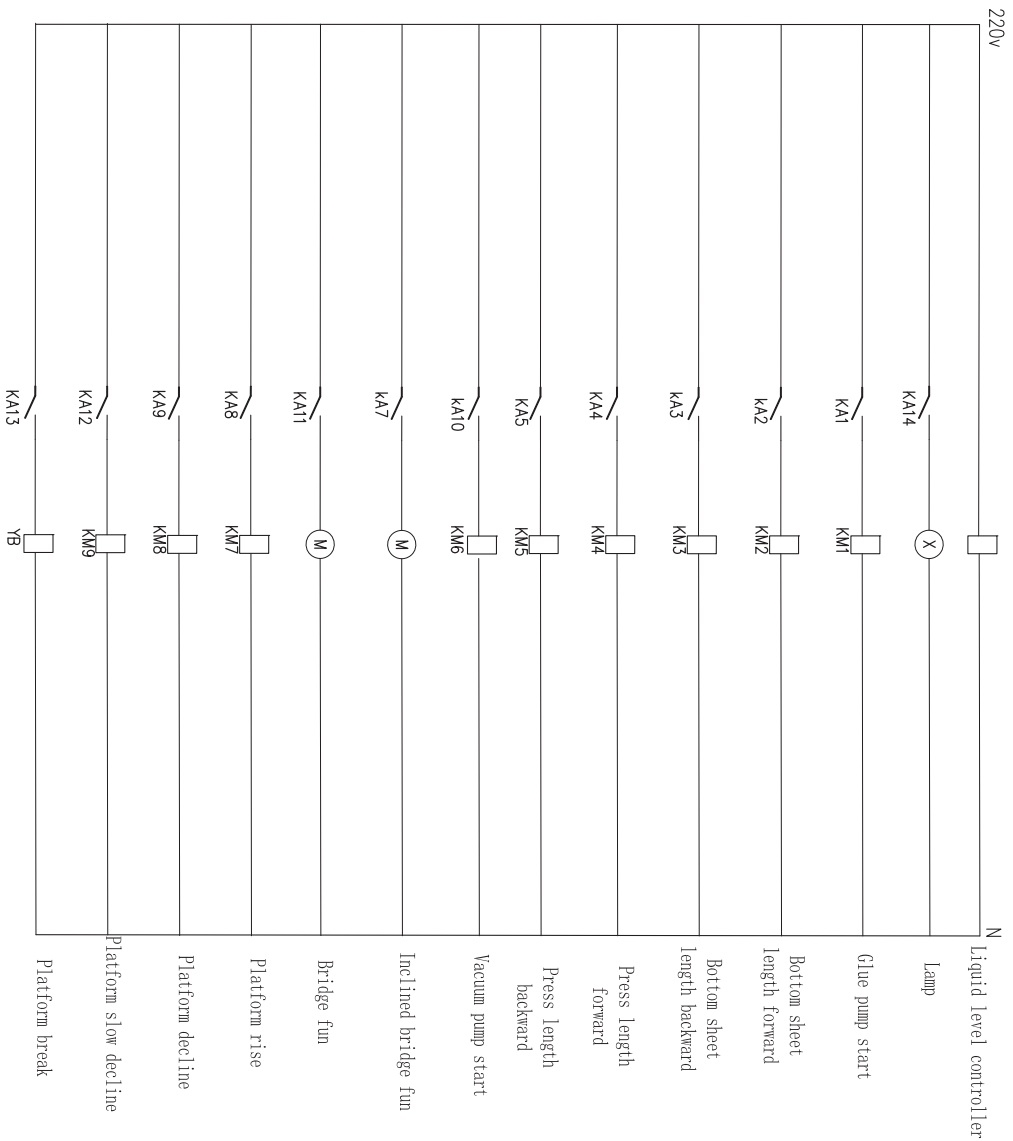




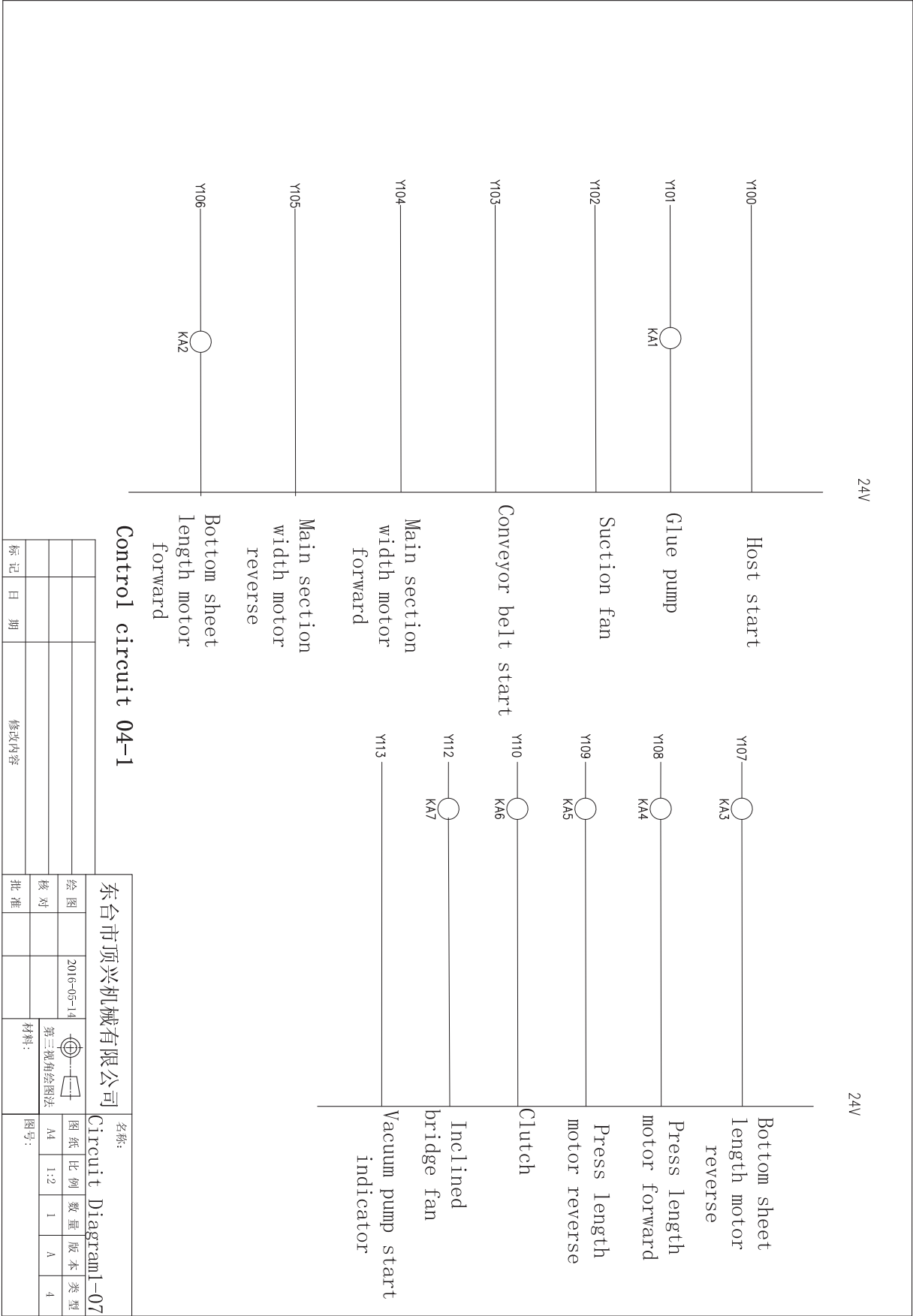
Main circuit 03

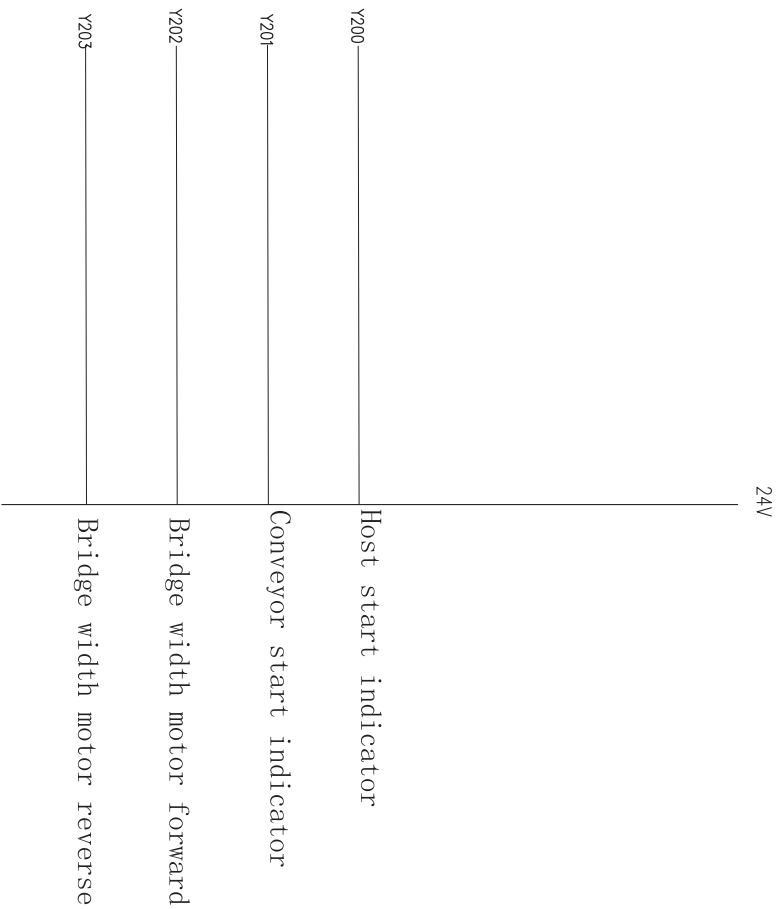
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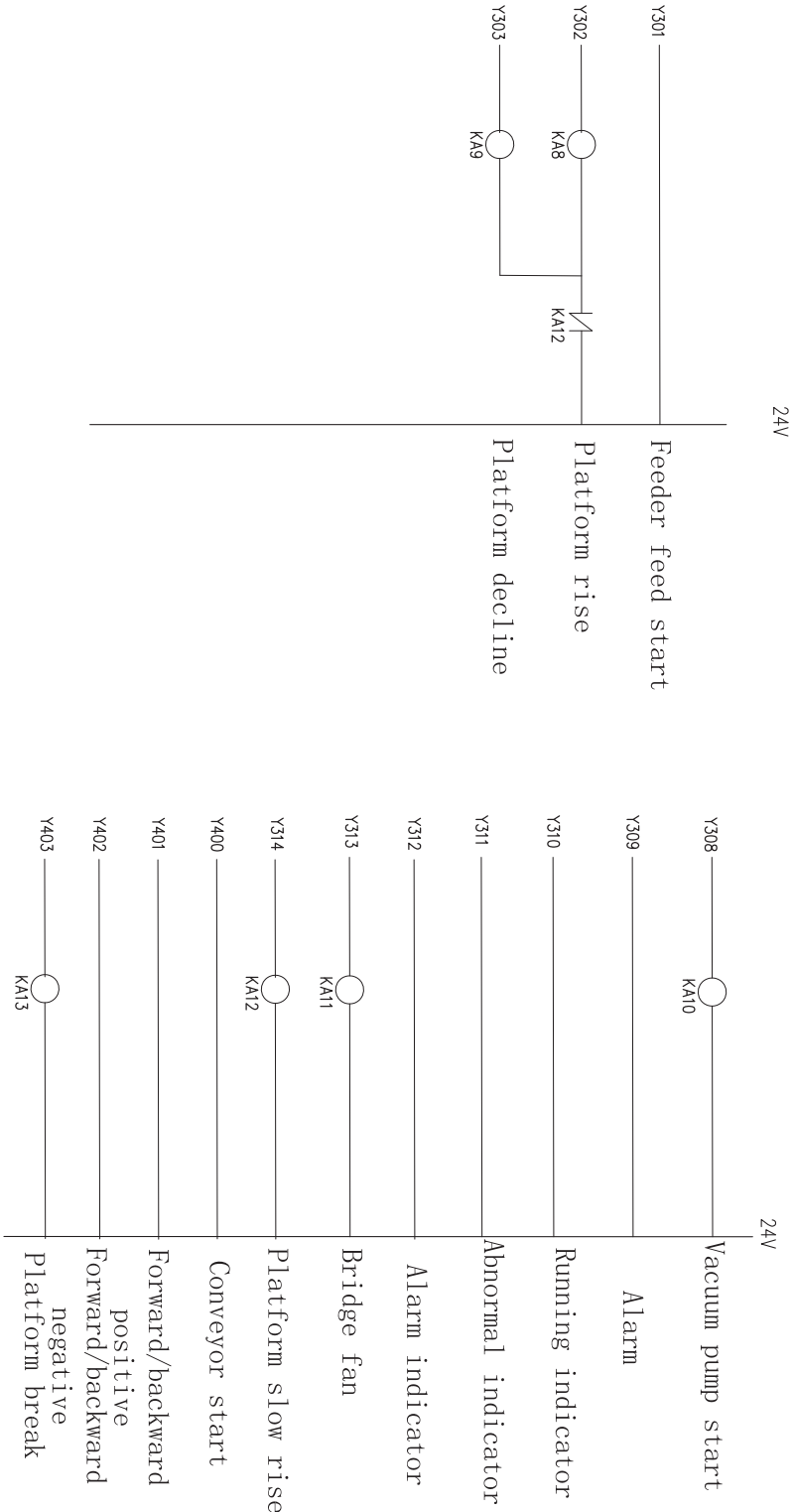


Control circuit 02				东台市顶兴机械有限公司				名称: Circuit Diagram1-06				
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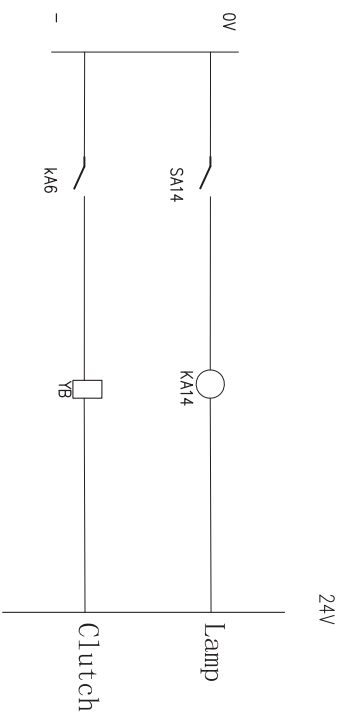




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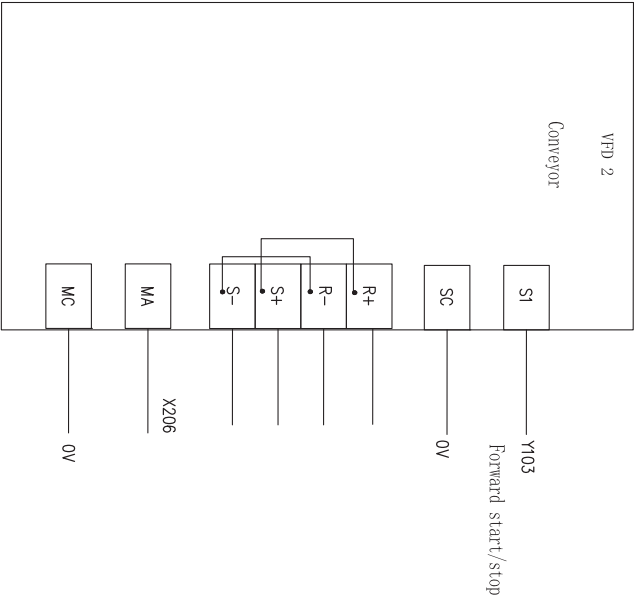
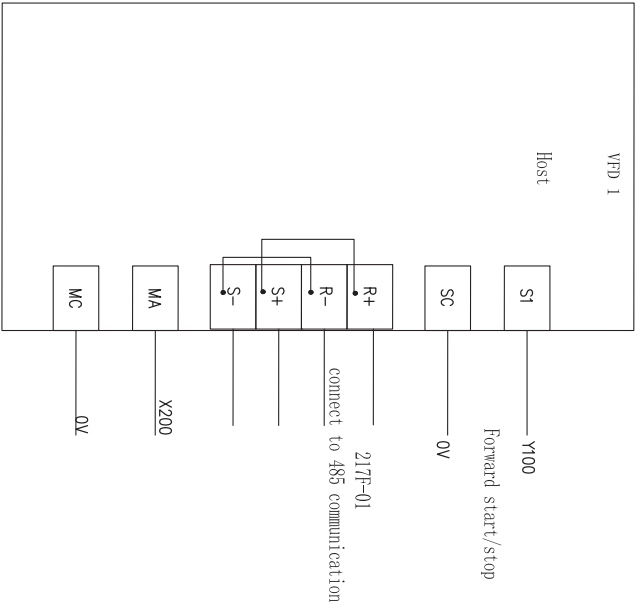


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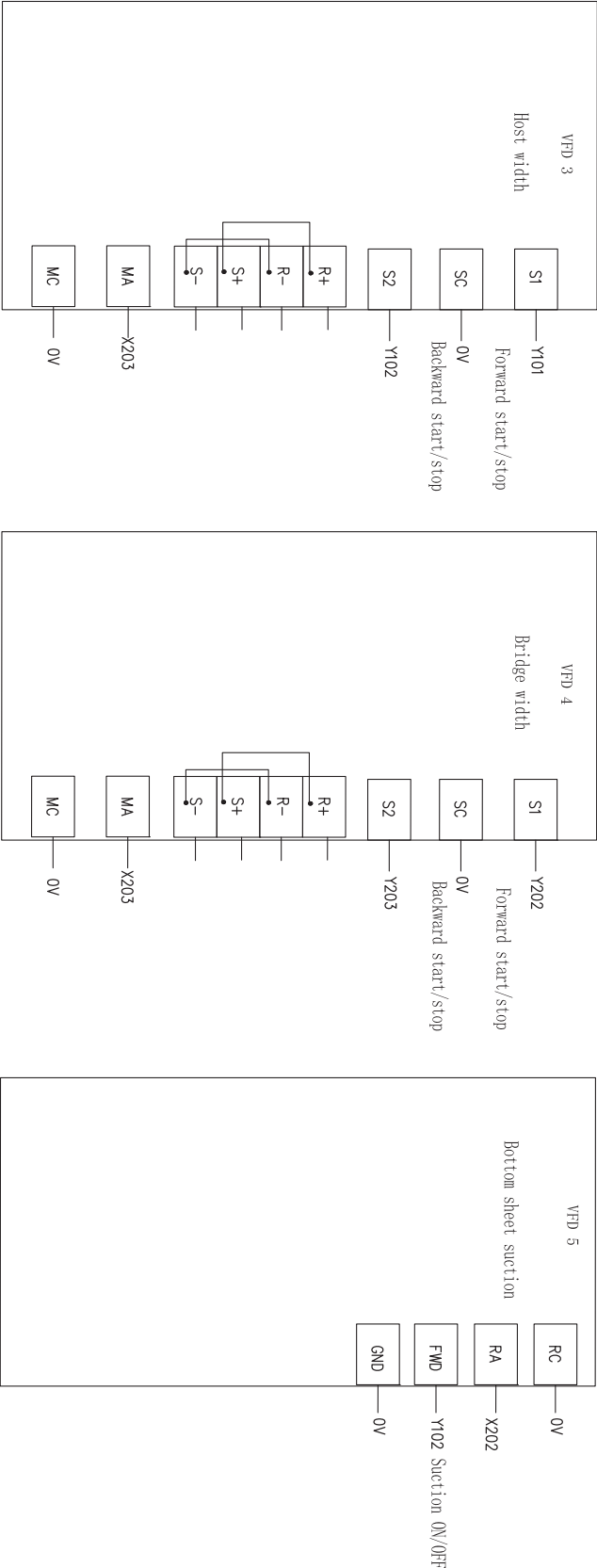
Control circuit 04-4

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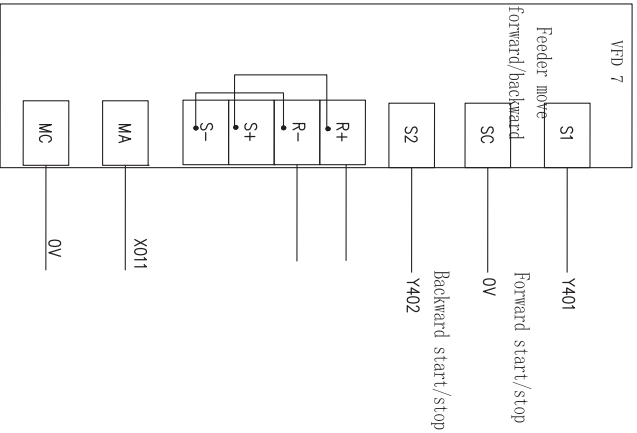
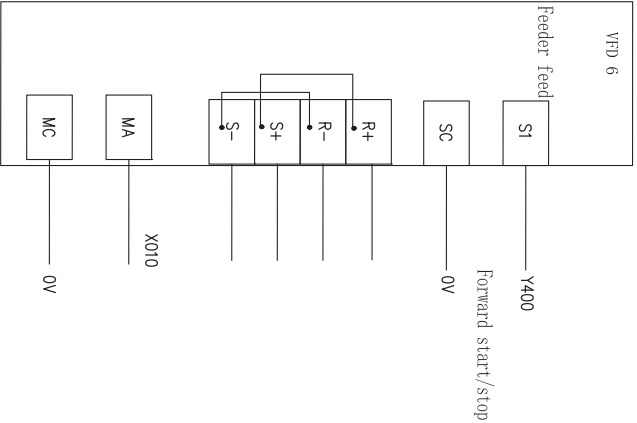
Control circuit 05-1

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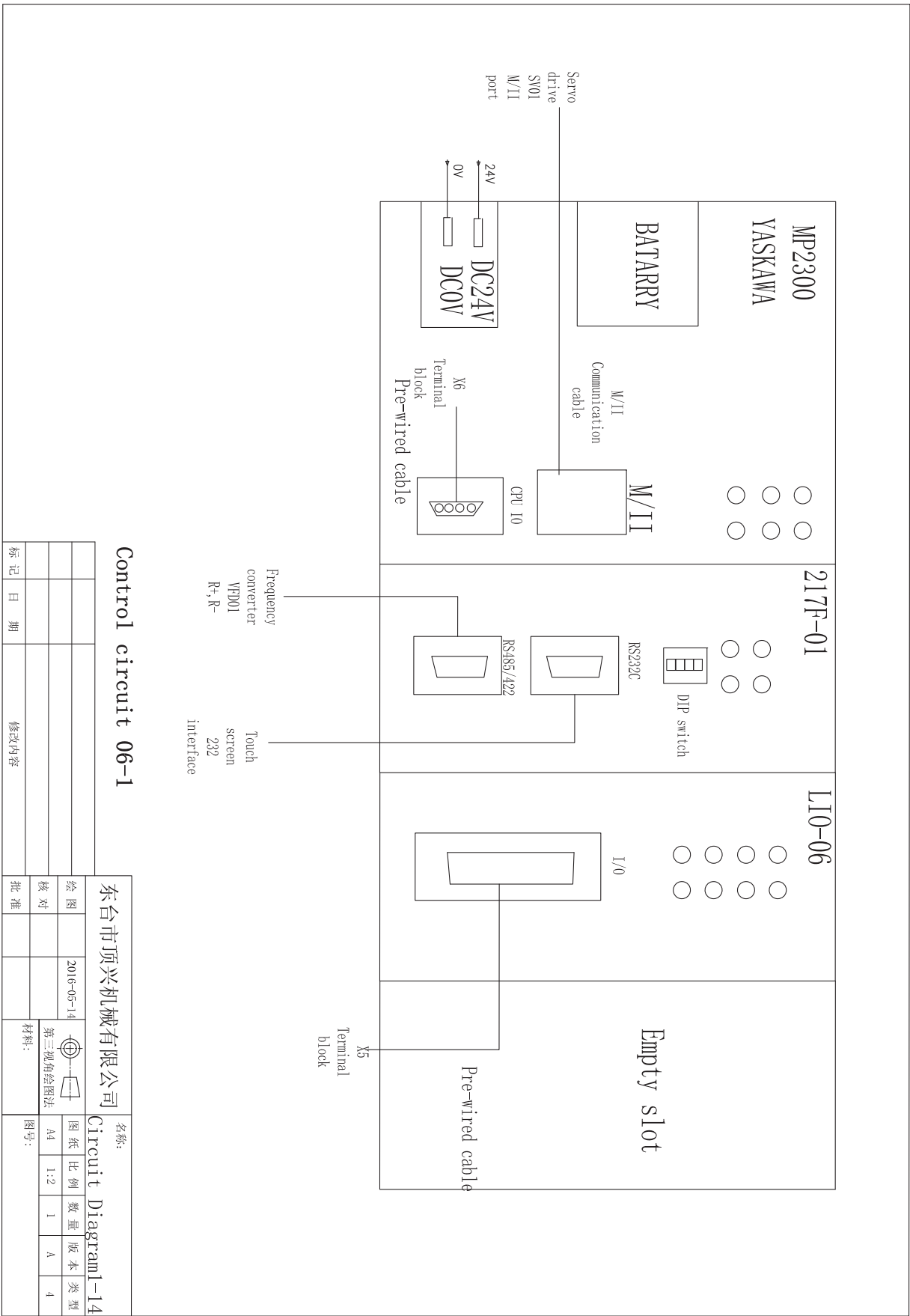
Control circuit 05-2

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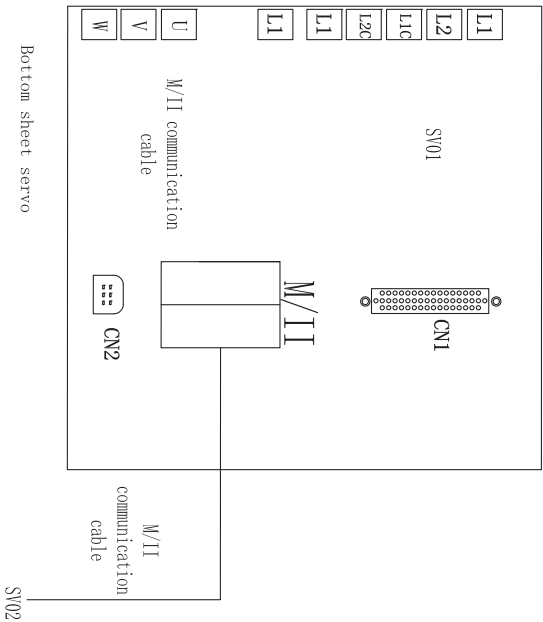


Control circuit 05-3

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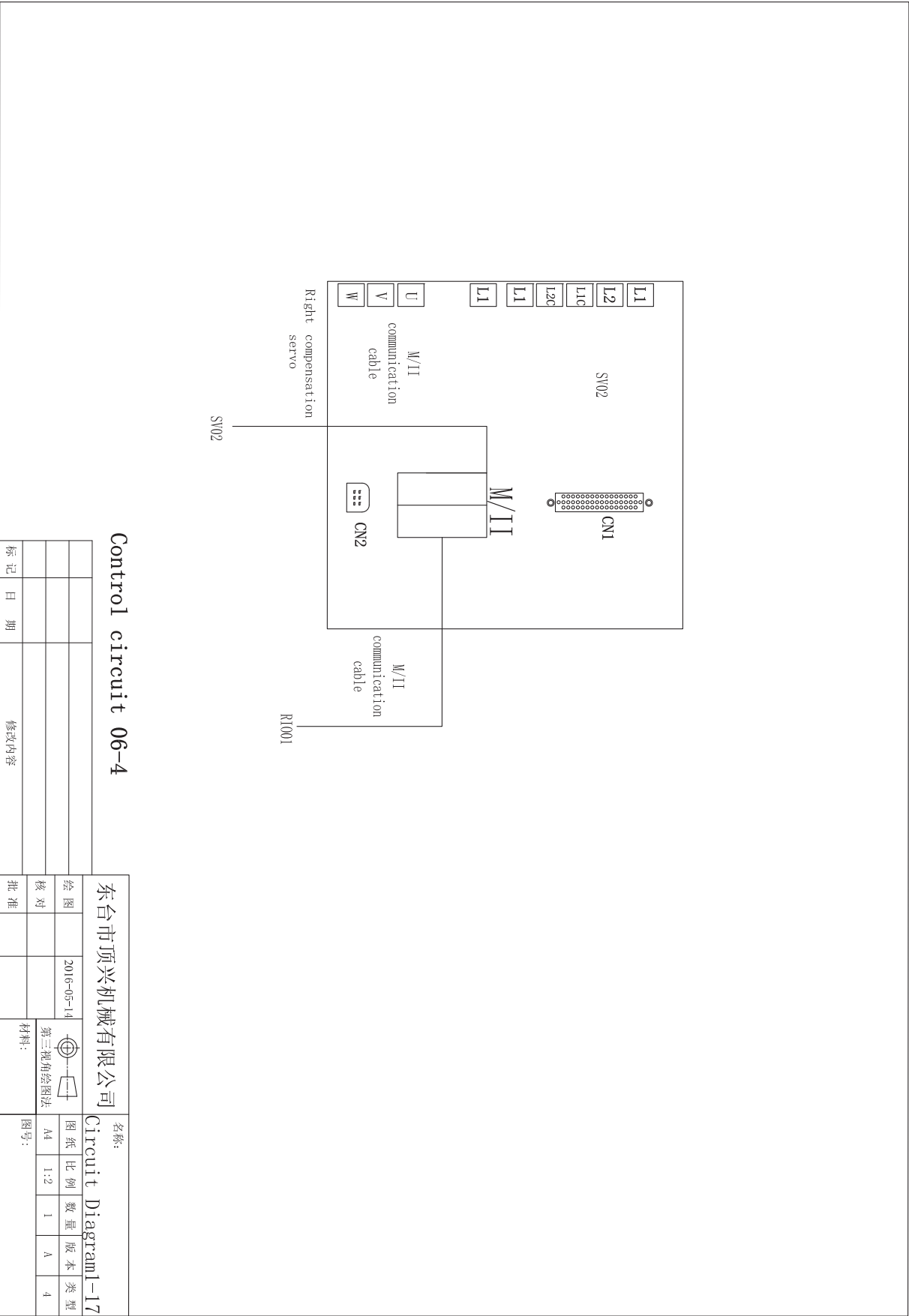


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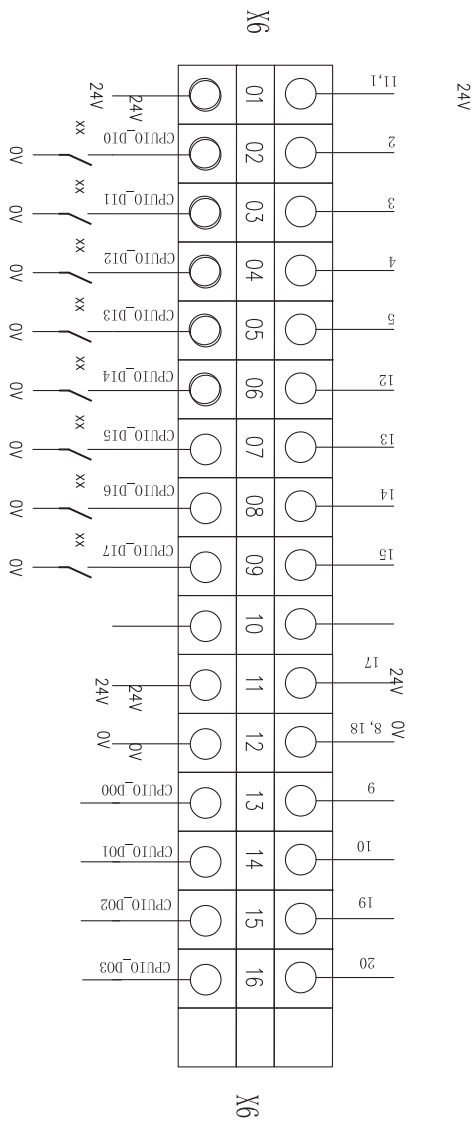


Control circuit 06-2

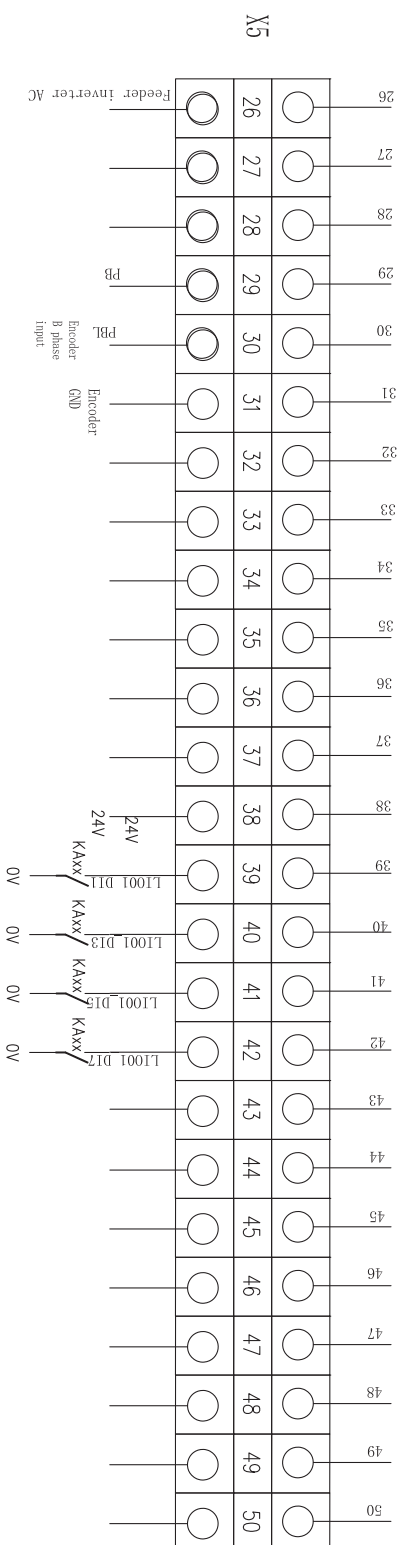
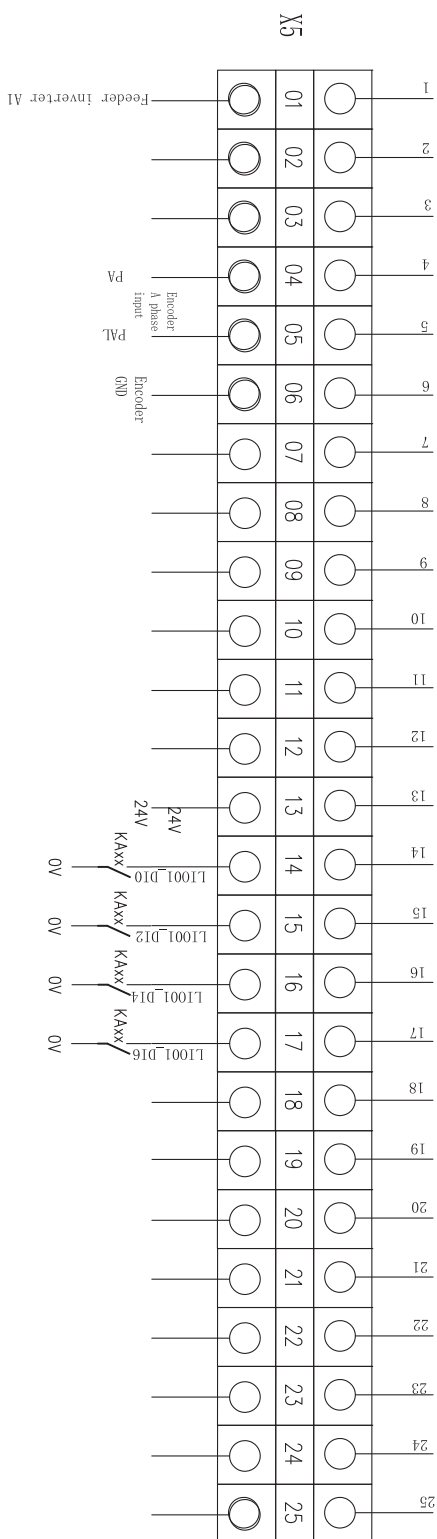
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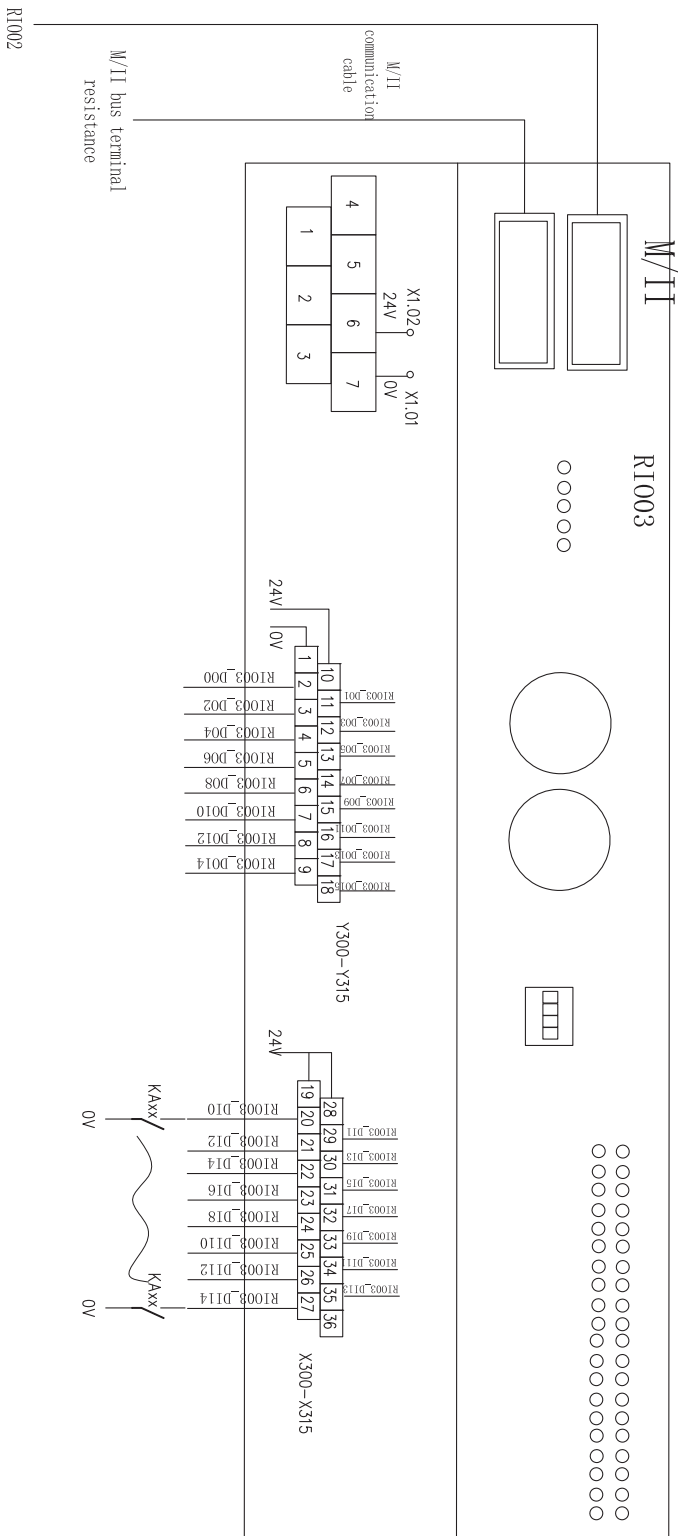


CPU IO Lead wire				名称: 东台市顶兴机械有限公司			
				Circuit Diagraml-18			
				绘图	2016-05-14	第三视角绘图法	图号: A4 1:2 1 A 4
				核对			
				批准			
标记 日期 修改内容				材料:			



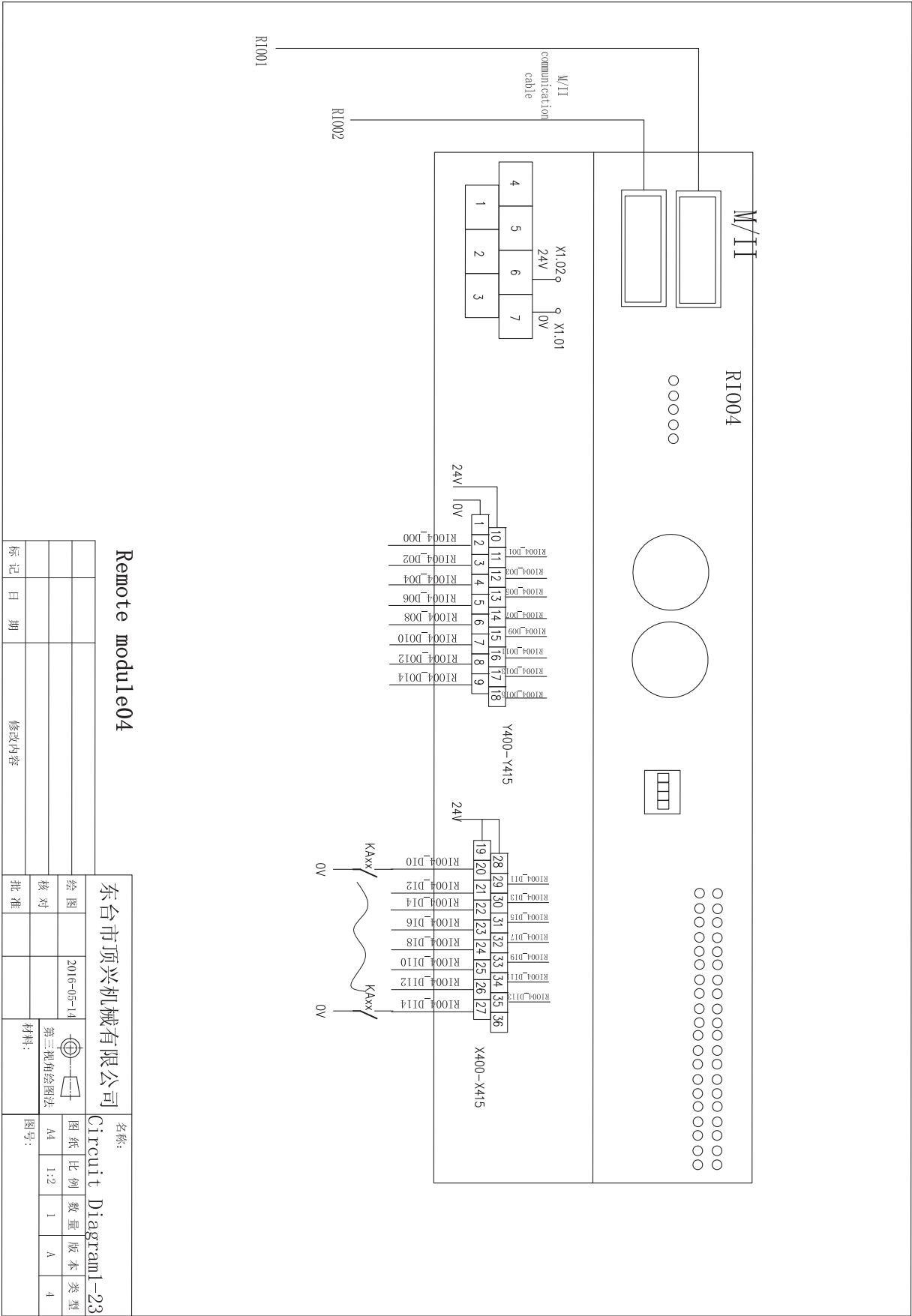
MPL IO module lead wire (LI006 module)

名称:				Circuit Diagram-19			
图 纸	比 例	数 量	版 本	类 型			
A4	1:2	1	A	4			
图号:							
材料:							
 第三角画法							
2016-05-14							
绘 图							
核 对							
批 准							
修改内容							
日 期							
标 记							



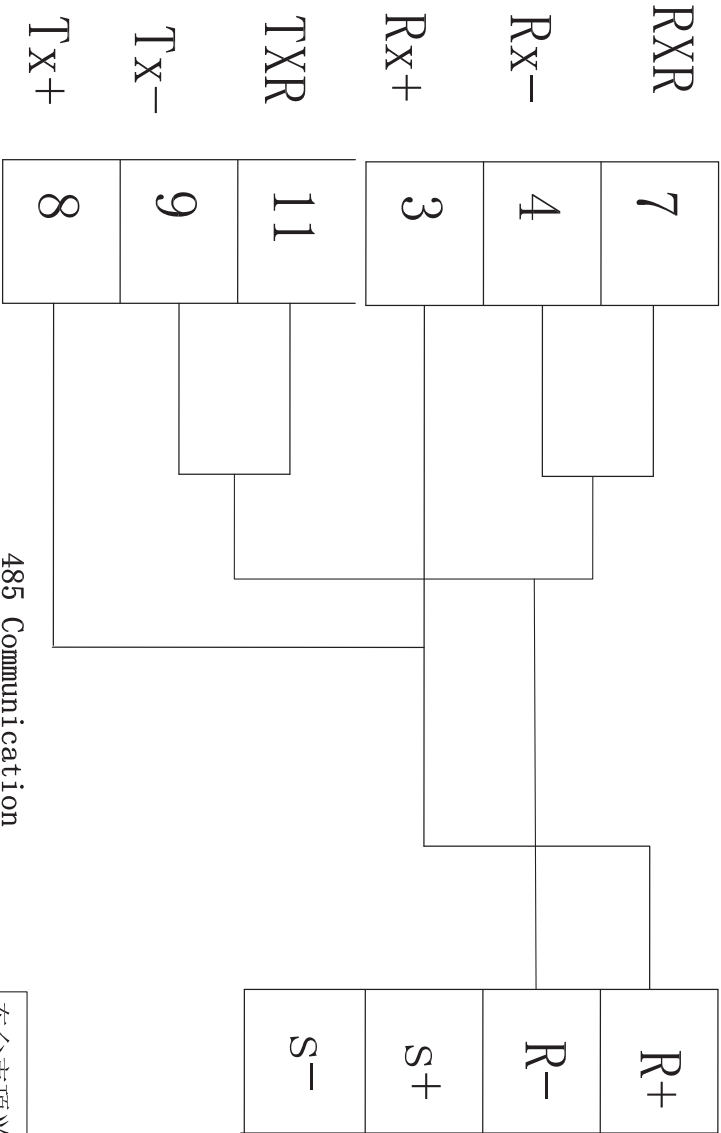
Remote module03

名称:		东台市顶兴机械有限公司		名称:		Circuit Diagram1-22	
绘图		2016-05-14		第三视角绘图法		图例	
核对				材料:		A4	
日期		修改内容				1:2	
标记						1	
						A	
						4	

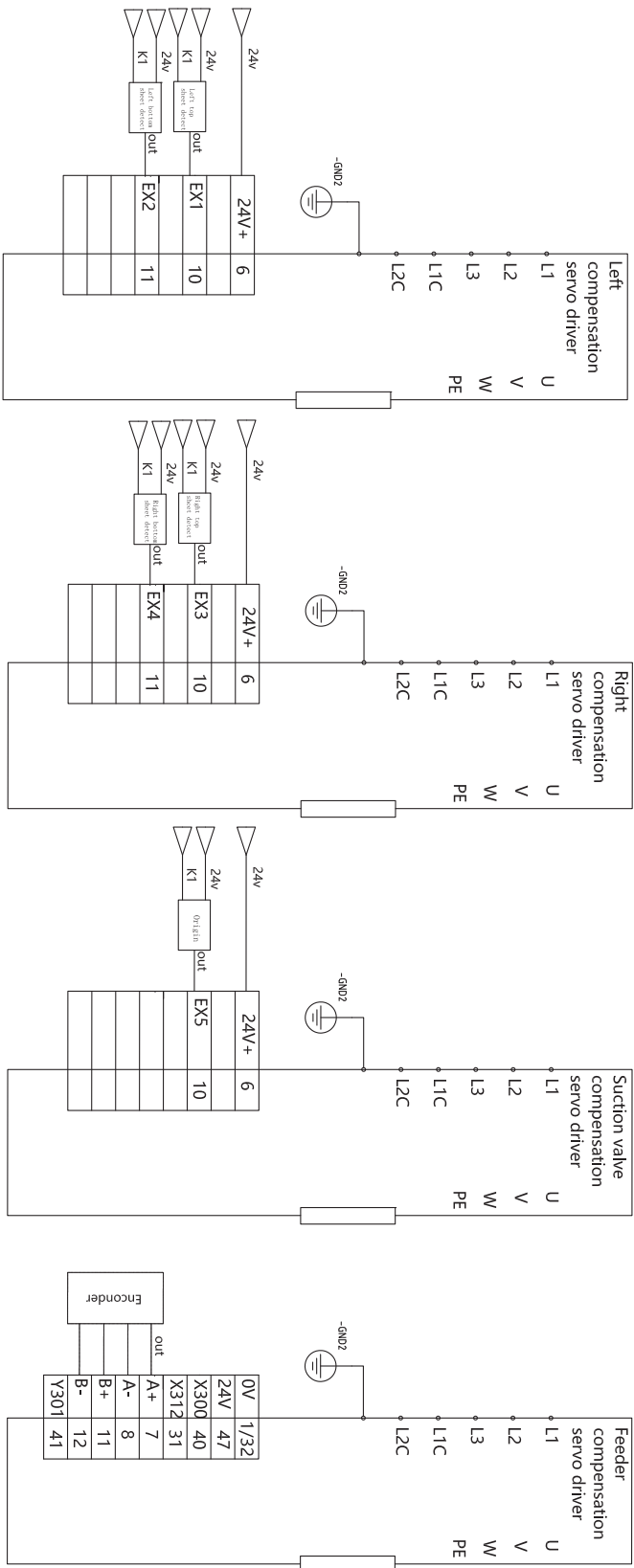


Motion controller module 217F 14-pin MDR connector

No. 1 Inverter

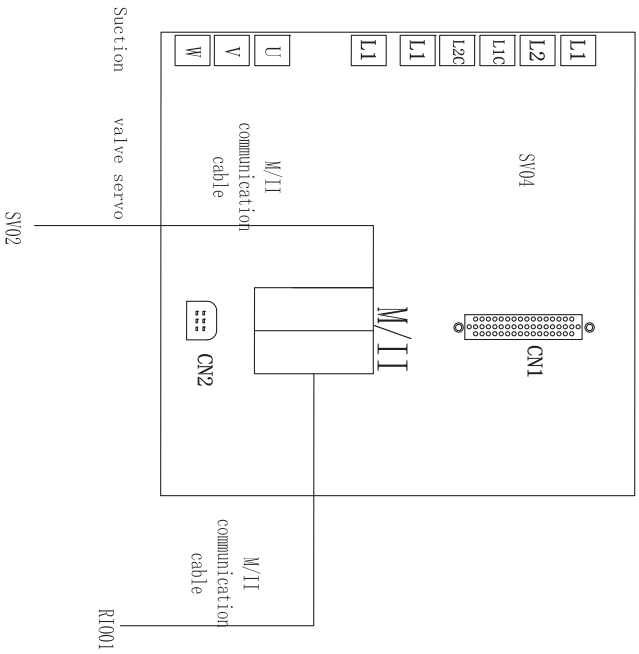


485 Communication				名称: Circuit Diagram1-24			
				绘图	2016-05-14	第三视角绘图法	图 纸 比 例
				核 对			A4 1:2
				批 准		材料:	数量 1
标 记	日 期	修 改 内 容					版 本 A
							类 型 4



Servo drive proximity switch wiring diagram

名称:		东台市顶兴机械有限公司		图号:		Circuit Diagram1-25	
绘图		2016-05-14		第三版		数量	
核对				材料:		版本	
批准				图号:		类型	
标记		日期		修改内容		A4	
						1:2	
						1	
						A	
						4	



Control circuit 06-4

东台市顶兴机械有限公司		名称:		Circuit Diagram1-26	
绘图	2016-05-14	第三视角绘图法	图纸	比例	数量
校对			A4	1:2	1
批准		材料:	图号:	版本	A
标记	日期	修改内容		类型	4

Chapter 18:

WARRANTY CONDITIONS

1. Dingxing - Dongguan Dingyi Machinery Co., Ltd. warrants that the equipment is guaranteed to be free from defects in material and workmanship at time of shipment. If during the first year of the date of shipment, the buyer establishes to the seller's satisfaction that any parts manufactured by **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** were defective at the time of shipment, **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** will, at its own expense, repair or replace (but not install) replacement parts.

Sellers liability under this warranty is limited to replacement parts only and the seller will make no allowance for corrective work done unless agreed to by the seller in writing. Charges for correction of defects by others will not be acceptable, unless authorized in writing, prior to the work being performed, by an officer of the company.

Damage caused by deterioration due to extraordinary wear or by improper maintenance or lubrication or improper storage prior to installation, shall not constitute defects. Failure to install equipment properly shall not constitute defects. Warranty does not cover consumable items. Warranty does not cover adjustment to installation or periodic adjustment that may be required during normal operation.

2. The term of guarantee is equal to 12 (twelve) months from the date when the installation and commissioning of the equipment fulfilled. Within one year from the date of accomplishing the installation and commissioning of the equipment fulfilled (don't guarantee the serving life of the wearing parts).

Within the period of quality guarantee, in case of any defects or malfunctions of mechanical parts, which have been proven to be caused by seller's poor materials and assembly technology, upon receipt of the buyer's information in writing and photos, the seller will post spare parts which were mentioned by the buyer as soon as possible at its own cost and the spare parts should be installed by the buyer. The expense of the spare parts and the freight will be borne by the buyer.

3. The following components are not covered by the warranty;

- a. The repair, service and/or installation of any electric component or related replacement part for use with the equipment.
- b. The consumables, that are parts that have limited life expectancy and are designed to be replaced.

4. Dingxing - Dongguan Dingyi Machinery Co., Ltd. has made no representation, warranties, or guarantees, expressed or implied, not expressly set forth on above paragraph. **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** shall not be liable hereunder for any consequential damages, losses of profit, loss of production, or contract, financial, economic or any other indirect loss or consequential damage that in any form could suffer the other party.

5. No representative of **Dingxing - Dongguan Dingyi Machinery Co., Ltd.** has been conferred with any authority to waive, alter, vary or add to the terms of the warranty state herein, without prior authorization in writing executed by an officer of the company.

Chapter 19:

CONTACT INFORMATION



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