



HOSON

# Operation Manual

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-----ZH-1000 BFT

Efficiency & Performance  
Specialized & Creditable

AUTOMATIC FOLDER GLUER MACHINE

# CONTENT

一.	Brief introduction . . . . .	1
二.	Precautions . . . . .	1
三.	Technical guidance on machine adjustment . . . . .	1
四.	Operation methods and steps	
4-1	Paper feeding unit . . . . .	2
4-2	Pre-folding unit . . . . .	3
4-3	Bottom hooking unit . . . . .	4
4-4	Folding unit . . . . .	6
4-5	Pressing unit. . . . .	7
4-6	Clamping unit . . . . .	8
五.	Methods and steps of belt replacing	
5-1	Paper feeding unit . . . . .	9
5-2	Pre-folding unit . . . . .	10
5-3	Bottom hooking unit . . . . .	11
5-4	Folding unit . . . . .	12
5-5	Pressing unit. . . . .	13
六.	Electric circuit diagram. . . . .	14

## 一. Brief introduction

Please read this operation manual carefully for you to correctly and effectively use ZH-1000 BFT bottom hooking type box-pasting machine for a long term. The operation manual is edited and written with utmost care, but if you find there is any uncharted matter, please feel free to contact us (our factory will dispatch the professional technical personnel to your place and perform technical guidance).

## 二. Precautions

- (1) Please examine the voltage of the machine is rated 380V before starting the machine (note: voltage fluctuation and other precautions please refer to the operation manual of frequency converter), then examine the space between paper feeding unit-top knife, bottom hooking type-hook folding steel knife and the belt should not be too small, otherwise it might cause the serious abrasion of belt and thus to shorten the service life of the belt.
- (2) Do not touch the moving unit of the machine with your hands or other sharp objects during the running of machine, such as: belt, belt pulley and etc, otherwise it might cause personal injury or damage of machine units.

## 三. Technical guidance on machine adjustment

- (1) Paper feeding unit: adjust the interval between locating plates. The overall position of the locating plate should be at the middle of the machine.
- (2) Transferring unit: the transferring unit can be divided into upper, lower, right and left four parts connecting transfer. The interval from side to side is to be adjusted according to the width of the paper (note: the interval between outside of the belts of two sides should be 5mm larger than the formation dimension of the paper box, that is about 2mm away from of each side of the folding mark).
- (3) Bottom hooking unit (for details please see page 4)
- (4) Forming unit: adjust the intervals between two knives according to the width of the paper box, and then adjust the forming knife. Install the forming steel bar to assist box folding during belt folding for large box folding.
- (5) Pressing unit: the paper box enter folding unit after formation of paper box, adjust the roof bar according to the length of paper.
- (6) Clamping unit: adjust the three white nylon wheels to appropriate space after being pressed; adjust the spring pressure for the transferring belt into paper box connection, to let the pasted part of the box sufficiently bind and hard to loose.

The pasting mechanism of the machine, adjust hand wheel firstly to let the pasting wheel aim at the to-be-pasted part of the paper box, lock down the pasting mechanism screw. If the pasting deviates, unloosen the clamping screw of pasting box, lock it down after fixing it to right position. Control of pasting flow: adjust the black Bakelite screw on the pasting box, reduce the compaction and increase the loose. The height of upper white nylon wheel of pasting box should be at the same level of pasting copper wheel.

#### 四. Operation methods and steps

##### 4-1 paper feeding unit

- ① Press down the jiggle bar (B) to raise the parts of paper feeding, turn the jiggle bar to right or left, moving conveying base see Fig.1-1, (normally, the intervals between the conveying bases should be even, under special situation, it should be decided according to the shape of the paper). After adjustment of the conveying base, reset the jiggle bar (b) and fasten the conveying base (M8 clamping screw).Paper feeding base Fig. 1-1

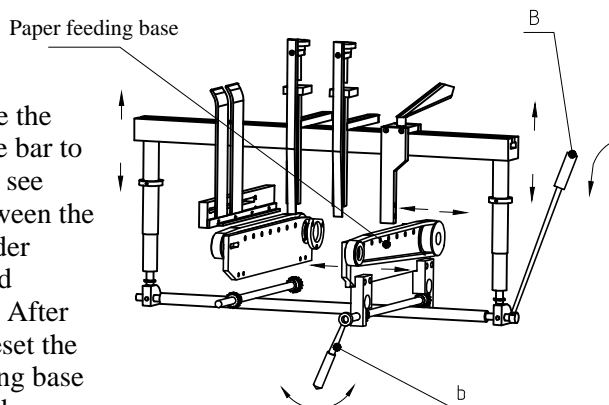


Fig 1-1

- ② Turn the fixed handle (C), loosen the fender bracket subassembly, move the subassembly according to the specification of paper, see Fig.1-2. The overall position of the fender bracket subassembly of both sides should be at the middle of the machine. Its interval is to be moved to both sides according to the width of paper. Fasten it after confirming the position.

Fender bracket subassembly Fig. 1-2

Fender bracket subassembly

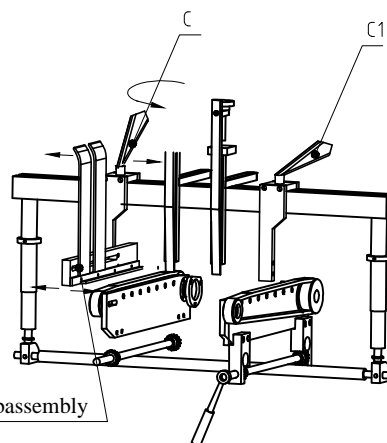


Fig 1-2

- ③ Loosen the retaining nut (D), move the paper feeding top knife subassembly to left/right, see Fig. 1-3. The overall position of each top knife subassembly should be at the middle of the machine. Under special situation, it should be decided according to the shape of the paper.

- ④ Turn the adjusting screw rod (E) to left/right, move the paper feeding top knife subassembly upwards/downwards, see Fig.1-3, the distance between the knifepoint of top knife and the paper feeding belt should be 1.5 times of paper thickness, see Fig.1-3. (Too large interval might cause multiple paper feeding at the same time).Paper T × 1.5 Fig.1-3

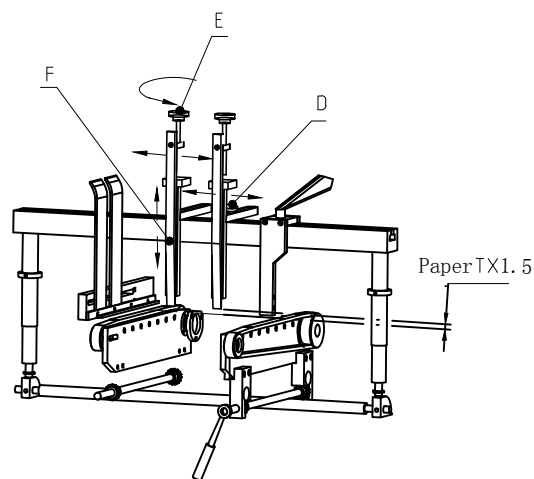


Fig 1-3

#### 4-2 Pre-folding unit:

- ① Control the position of upward clamping roller subassembly (A) and pre-folding upward clamping roller subassembly (B) through clamping screw A1 and adjusting screw B1, thus to increase or reduce the downward pressure of two clamping roller, see Fig 2-3. The appropriate pressure directly influences the normal transfer of the paper. Normally, the transitive pressure of two subassemblies should be balanced. (The pressure for special shaped box is to be adjusted according to actual situation).

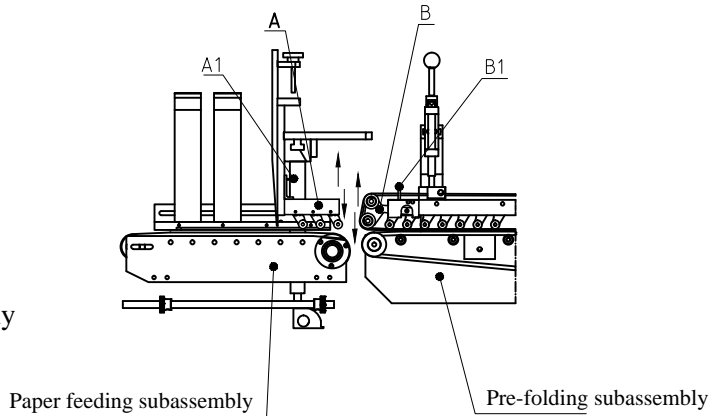


Fig 2-1

- ② Turn the jiggle bar (b) to left/right, the moving conveying base see Fig.201, normally the position of two conveying bases are in the middle of the machine, the interval between the bases are to be decided according to the width of paper. Adjustment of Paper feeding speed governor(C), turn the knob (C1) to left/right, see Fig.2-1, which is to increase or reduce the paper feeding speed of paper feeding unit. Higher the speed, smaller the interval of paper boxes entering the pre-folding unit, vice versa.

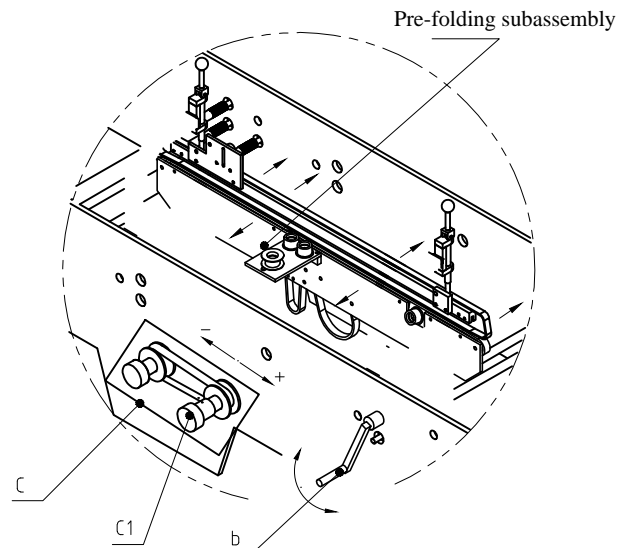


Fig 2-2

- ③ Press down the pressure-adjusting handle (D), to raise the upward clamping subassembly and eliminate the pressure, contrarily, to apply pressure. See Fig2-2. Move the pressure-adjusting button (D1) up and down to increase or reduce the pressure of pressure subassembly.
- ④ Pre-folding small side folding subassembly (E), consists of pre-folding blade and resetting steel bar, adjust the datum plane of the blade to level, fold the box of small side 180°. The resetting steel bar reset the paper box to flat paper. The detailed position is to be decided according to the moving situation of paper.

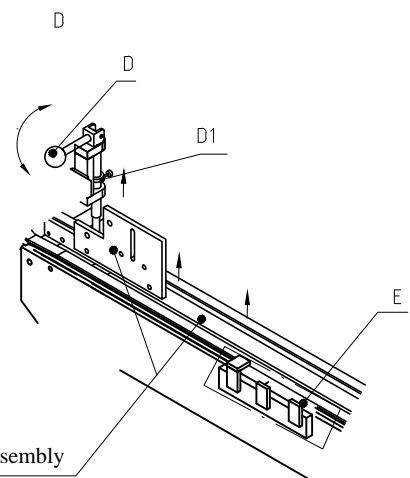


Fig 2-3

Upward clamping subassembly  
Fig 2-2

### 4-3 Bottom hooking unit:

- ① The adjustment of base and upward clamping subassembly is the same with the pre-folding unit. Hooking mechanism subassembly, reverse folding subassembly and other auxiliary subassemblies are retained by clamping screw. Loosen all the clamping screws to adjust the desired position of each part, refer to Fig 3-1. The pasting wheel (E) in the Fig provide pasting to the bottom of paper box, glue bucket (D) is to store glue. Add appropriate amount of glue and then cover it with a cap to avoid the evaporation of glue. Adjusting screw of glue amount (d), turn to right to increase the glue amount, vice versa.

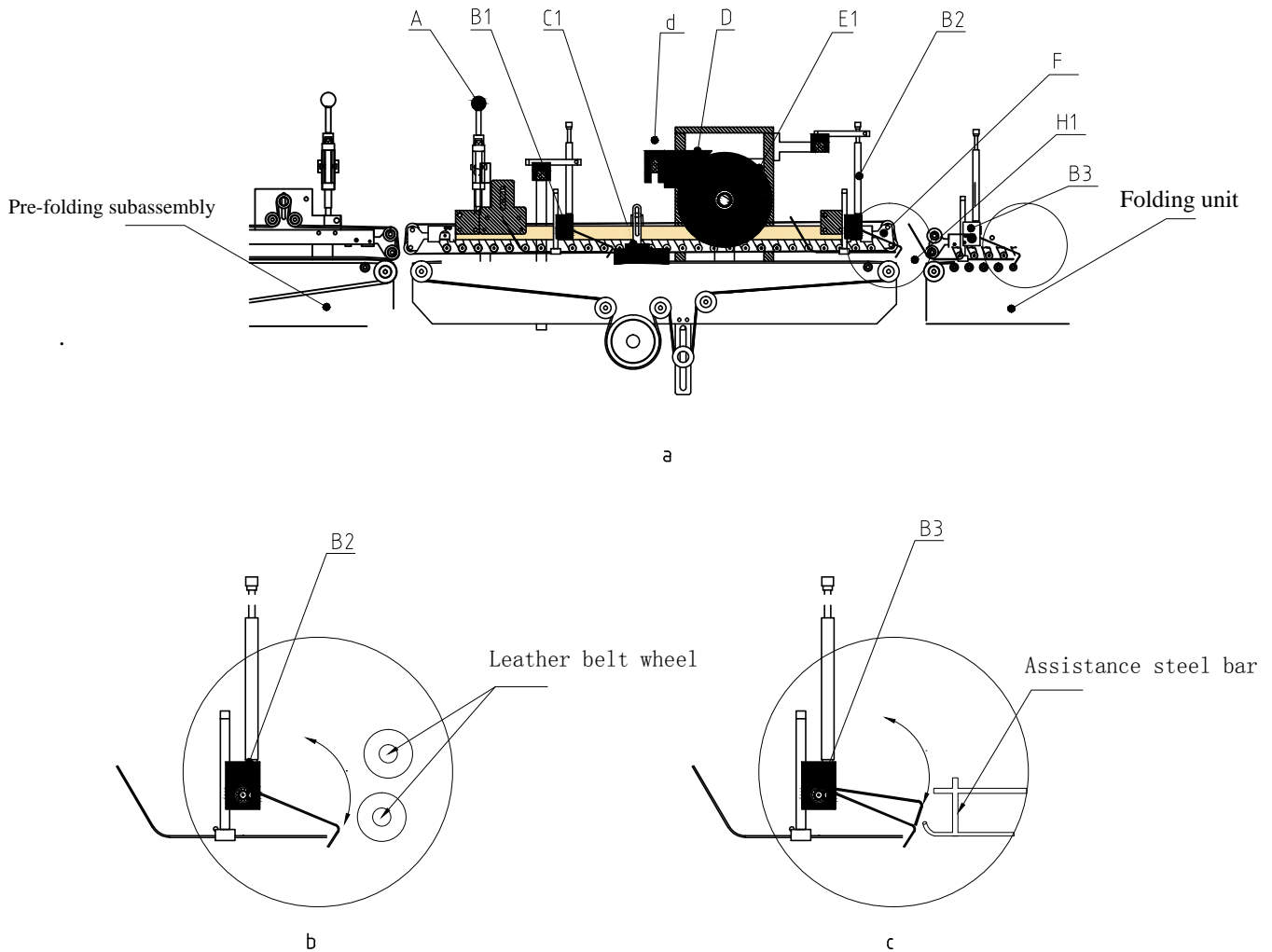


Fig 3-1

- ② Bottom fold organization module B2, B3 regulate position, should with origin fold department leather belt round and assistance steel bar keep certain position, keep Bottom from breaking steel bar and empess department occurrence hit. see diagram 3-2 inside b, c.

- ③ The position parameters and working principle of hooking subassemblies of bottom hooking unit.
- The whole procedure of hooking fold consists of three steps fulfilled by hooking fold (B) and reverse folding (C) subassembly. The whole procedure is compact and tight; the cooperation should be very suitable. The coordination of position of two subassemblies are directly affect the hooking formation of the paper box, the corresponding paper box position refer to Fig.302. Please adjust the position of two subassemblies to the best position fitting the paper box. After confirmation, the auxiliary steel bar presses the paper box formed to avoid the paper box rebound and send it to the folding unit.

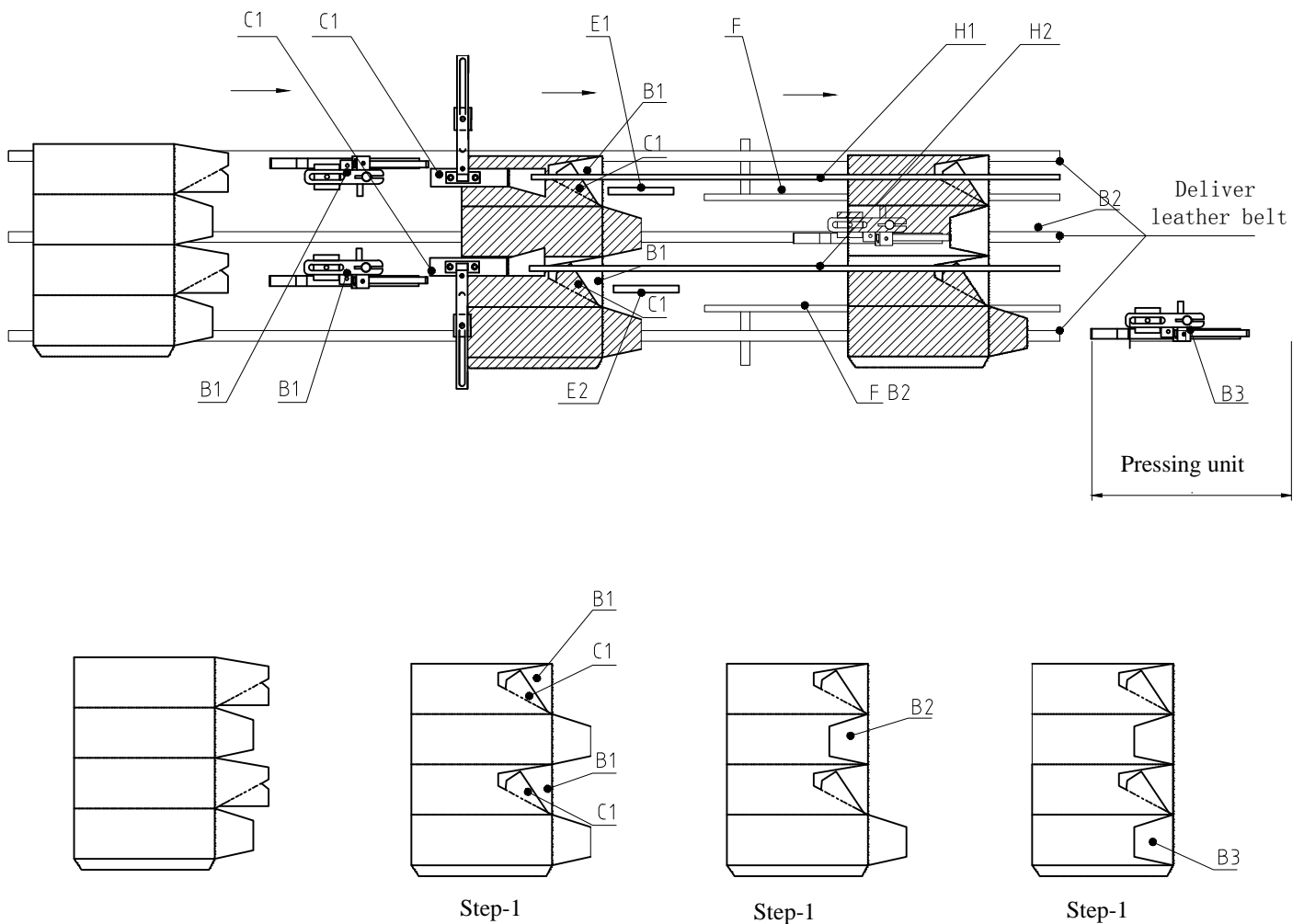


Fig 3-2

## 4-4 folding unit

- ① The adjustment of base and upward clamping subassembly is the same with the pre-folding unit. Forming knife subassembly, reverse folding subassembly and other auxiliary subassemblies are retained by clamping screw. Loosen all the clamping screws to adjust the desired position of each part, refer to Fig 4-1.

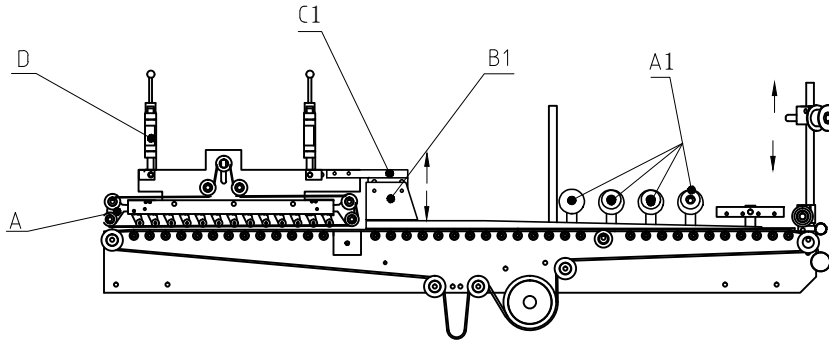


Fig 4-1

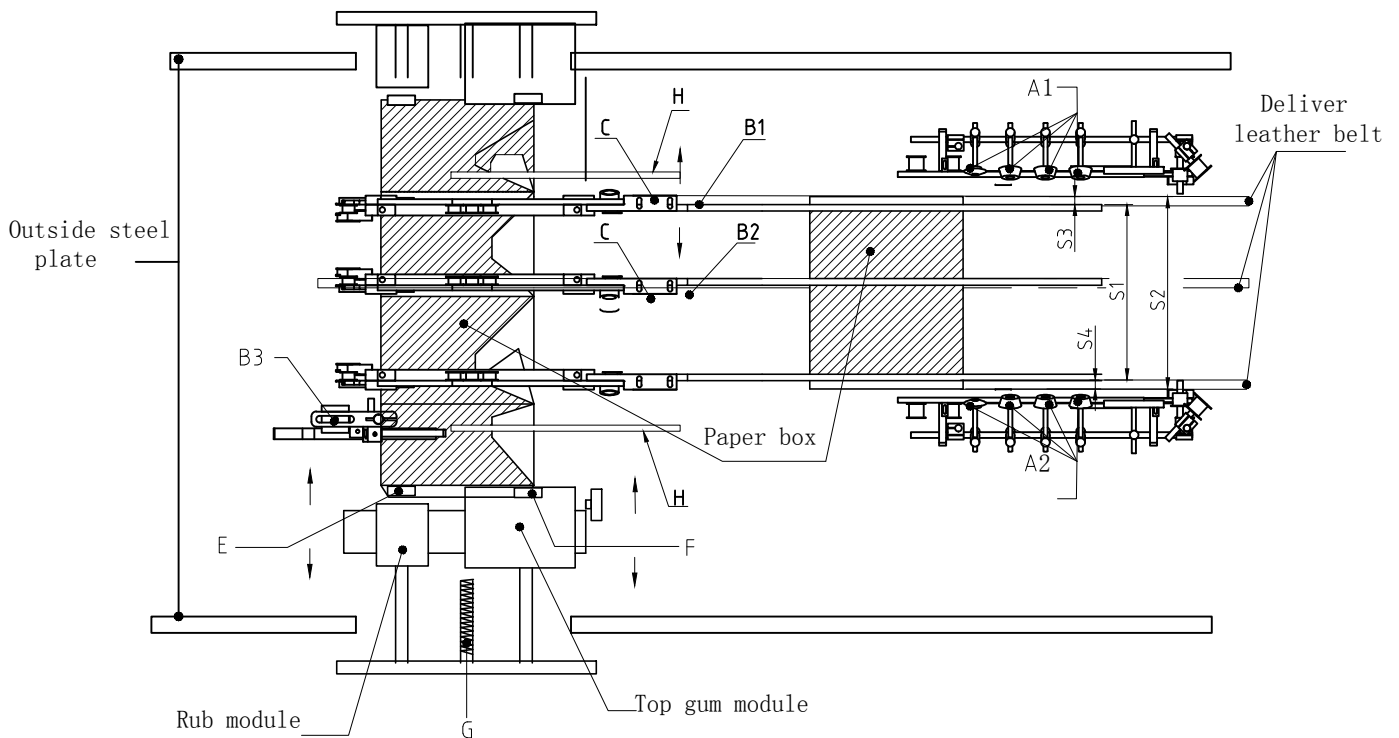


Fig 4-2

- ② After the initial adjustment of forming knife (B) with the conveying base, it can also be delicately adjusted on the knife handle bracket (the width of two knives should be 2-3mm smaller than the formed paper box). That is  $S2-S2=2-3\text{mm}$ ,  $S3=S4$  in the Fig.4-2. Auxiliary subassemblies (A) assists at one side of the forming belt, to pressurize appropriately to change the natural status of the belt, adjust the different status of the belt according to the situation of the paper box. Assisting formation would be much better. Adjustment of grinding and pasting subassembly: turn the lead screw (G) to grind the whole subassembly of pasting movably. The grinding wheel and pasting wheel should aim at and work on the to-be-paste part of the paper box.



#### 4-5 Pressing unit:

- ① The adjustment of base is the same with the pre-folding unit. The interval should be the same with the folding unit. All subassemblies are retained by clamping screws. Loosen all the clamping screws to adjust the desired position of each part, refer to Fig 5.

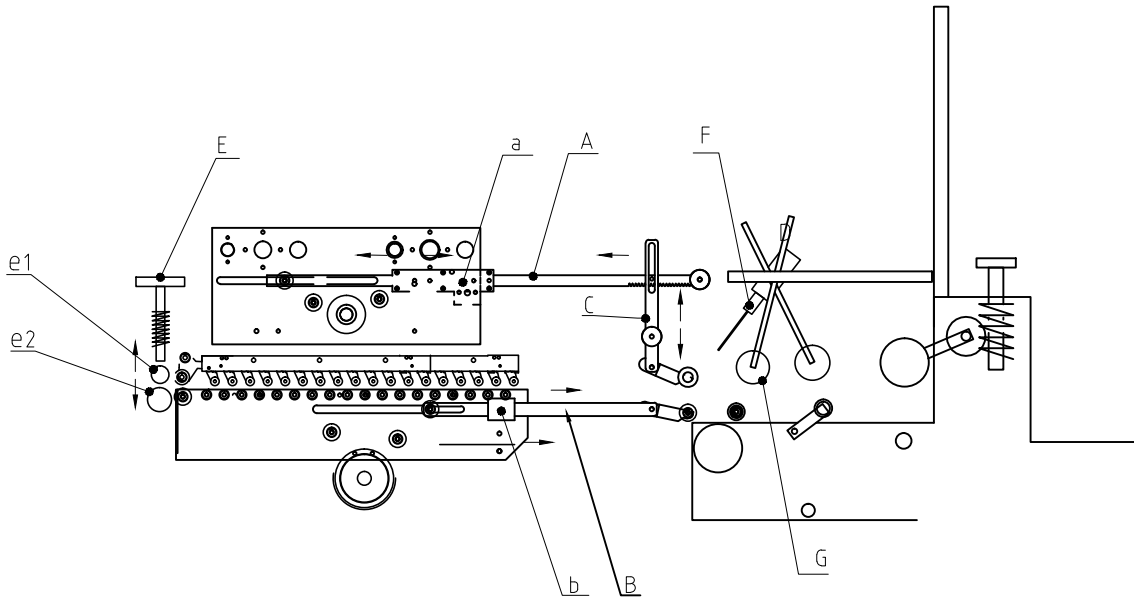


Fig 5

- ② In Fig.5, turn the knob a to adjust certain distance of upward paper delivery roof bar. Loosen clamping screw b to adjust the certain distance of downward paper delivery roof bar. The two roof bars raise corresponding distance to fit the delivery of paper box of different length.  
Turn knob E to adjust the shaft lever e1 to move up and down to increase or reduce the interval between shaft levers. Different intervals for different thickness of paper box.  
Urgent safe switch F, when machine stop is needed during urgent situation, it might stop immediately on encountering an obstacle automatically and reduce the discarding quantity of the paper box. (Normally placed on the right upper position of the paper delivery).

#### 4-6 clamping unit:

The knob (B) can adjust the worm wheel (b) to move up and down to increase or reduce the height of inlet of pressure mechanism (normally the best height for the paper box is 15mm)  
The knob (C) can adjust the upper and lower belt to pressurize partially, and clamp the paper box pasted and formed, which is good for the pasting effect. Tense the bearing (D) to loose or tighten upward clamping belt. Paper collection table

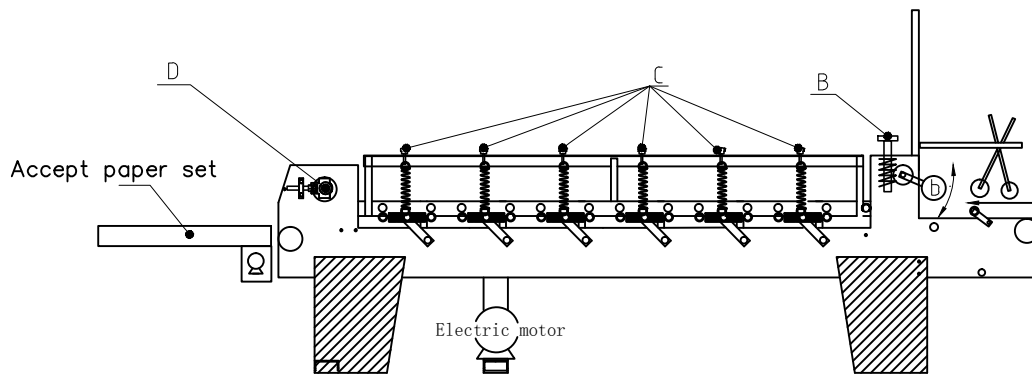
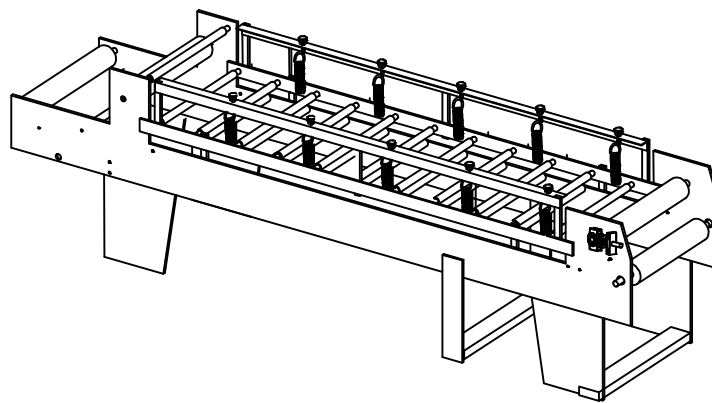


Fig 6



## Methods and steps of belt replacing

## 5. Methods and steps of belt replacing

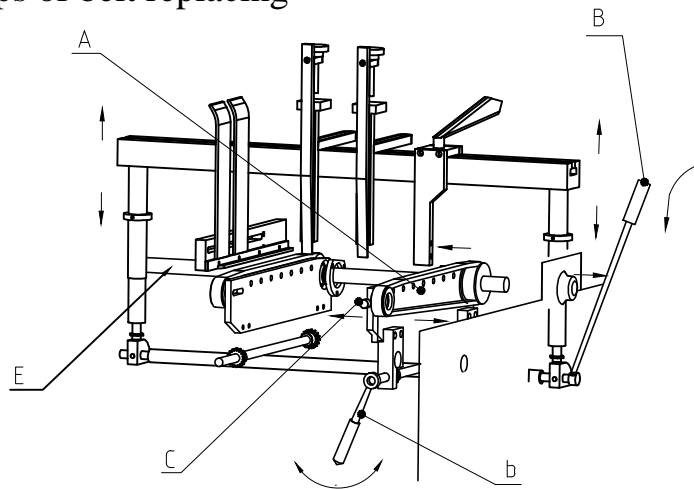


Fig 1-1

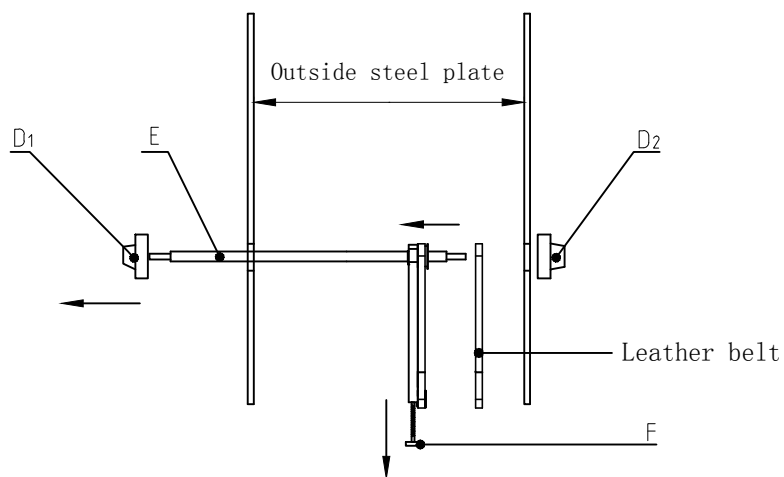


Fig 1-2

### 5-1 Step of replacement of paper feeding unit

- ① Press down the jiggle bar (B) to raise subassemblies of paper feeding unit, separate the paper feeding base by jiggle bar b, see Fig.1-1.
- ② Loosen bearing D1, fetch out the shaft level E, loosen the tightening screw F. Take the belt out and replace it, see Fig.1-2. Then reset the position of each part as original. And fasten them.

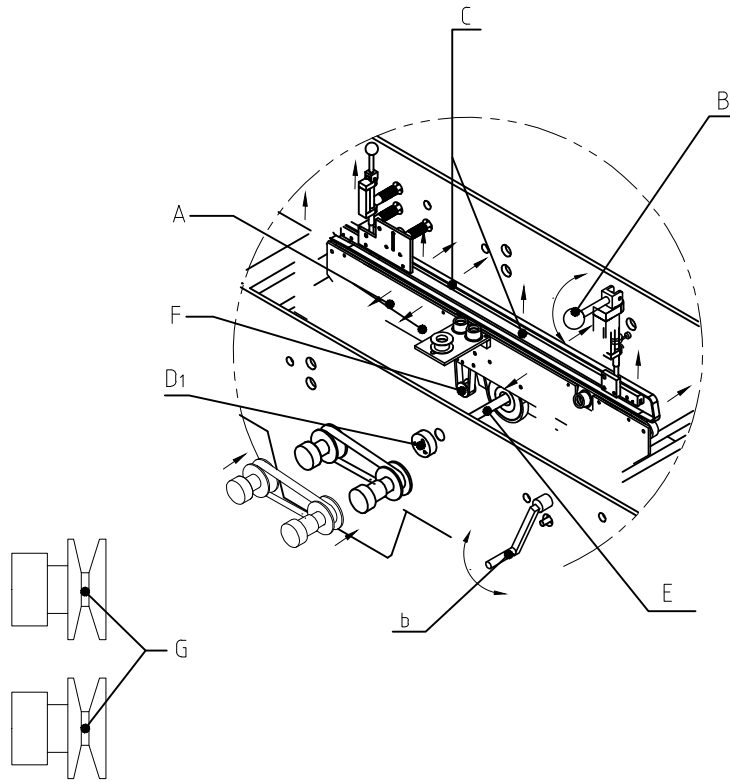


Fig 2-1

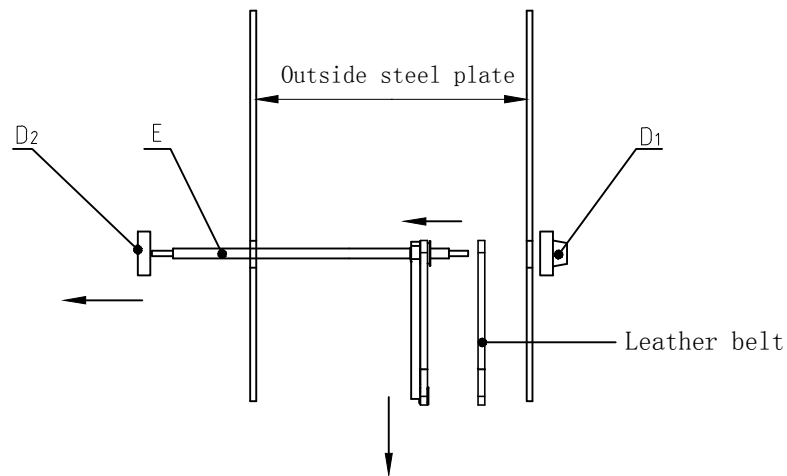


Fig 2-2

## 5-2 Step of replacement of pre-folding unit

- ① Press down the jiggle bar (B) to raise subassemblies of pre-folding unit, separate the pre-folding base by jiggle bar b, see Fig.2-1.
- ② Loosen bearing D2, fetch out the shaft level E, loosen the tightening screw F (Fig.2-1-F). Take the belt out and replace it, see Fig.2-2. Then reset the position of each part as original. And fasten them.
- ③ loosen the 2 change spur gears off , and hold them away from the 2 axes of rotation , change the strap under unrestricted condition, afterwards, fix the gears to where they were in the opposite way of loosening off. (see picture 1)

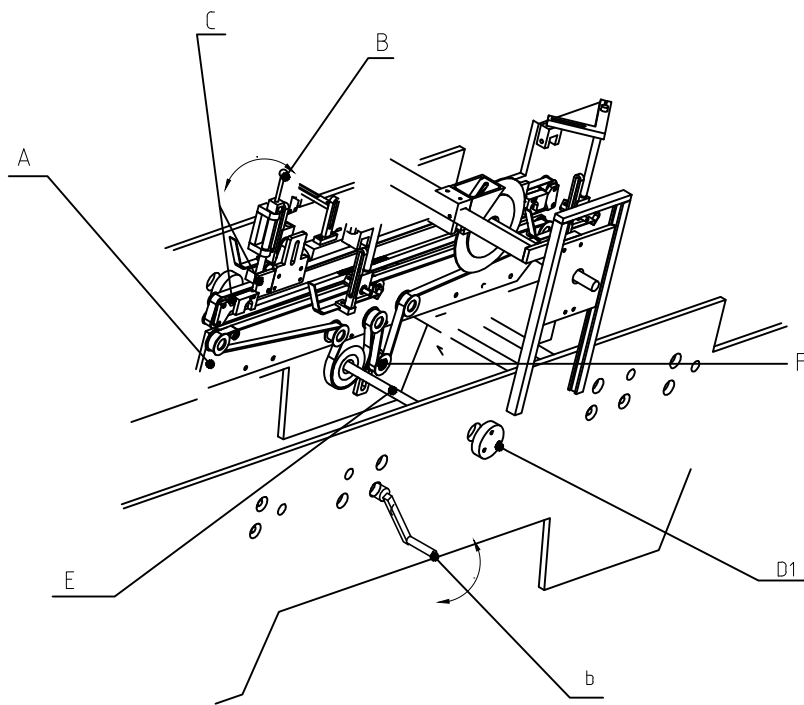


Fig 3-1

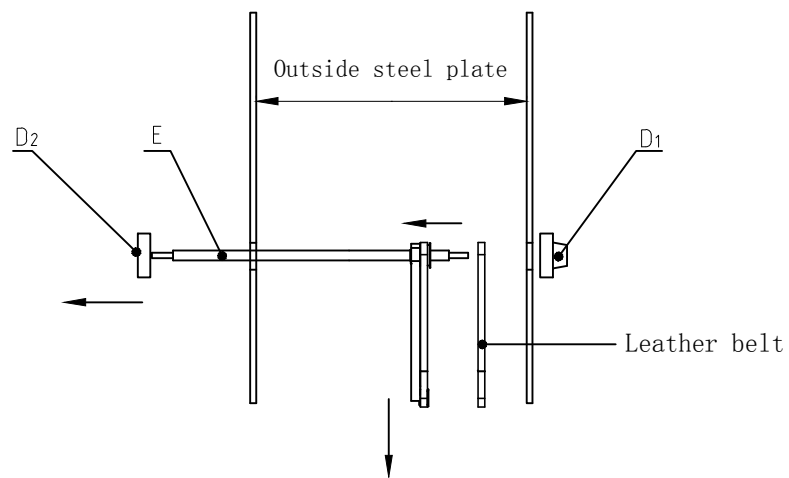


Fig 3-2

### 5-3 Step of replacement of bottom hooking unit

- ① Press down the jiggle bar (B) to raise subassemblies of bottom hooking unit, separate the bottom hooking base by jiggle bar b, see Fig.3-1.
- ② Loosen bearing D2, fetch out the shaft level E, loosen the tightening screw F (Fig.2-1-F). Take the belt out and replace it, see Fig.3-2. Then reset the position of each part as original. And fasten them.

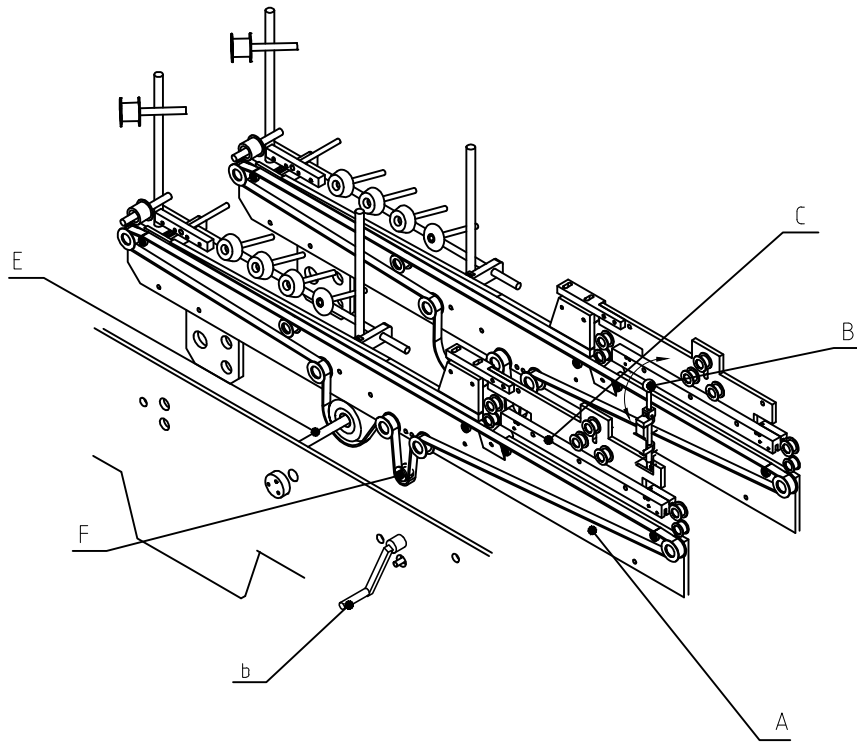


Fig 4-1

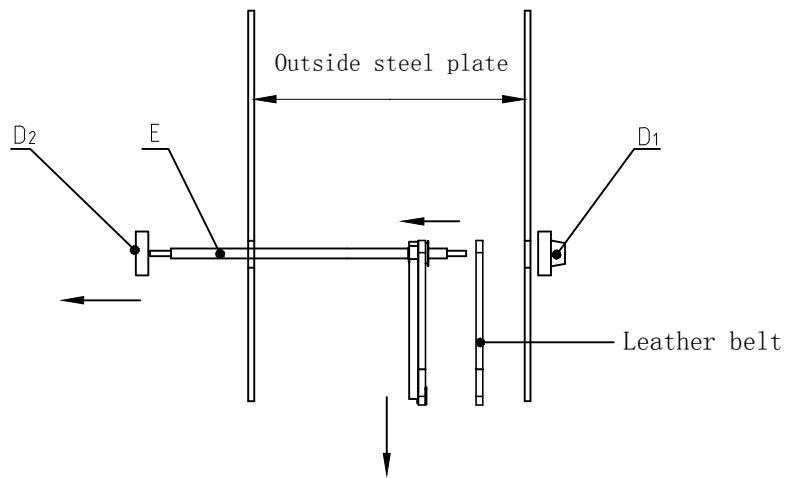


Fig 4-2

### 5-4 Step of replacement of folding unit

- ① Press down the jiggle bar (B) to raise subassemblies of folding unit, separate the folding base by jiggle bar b, see Fig.4-1.
- ② Loosen bearing D2, fetch out the shaft level E, loosen the tightening screw F (Fig.2-1-F). Take the belt out and replace it, see Fig.4-2. Then reset the position of each part as original. And fasten them.

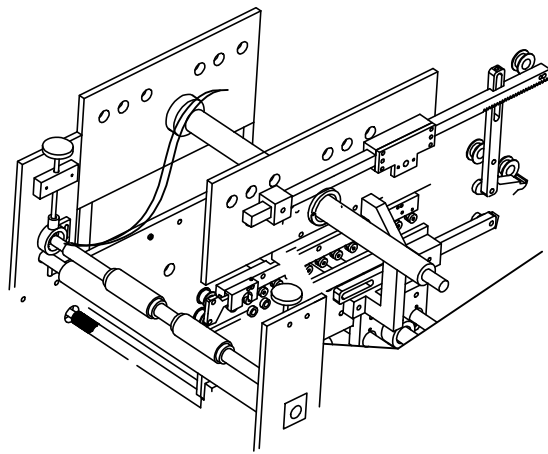


Fig 5-1

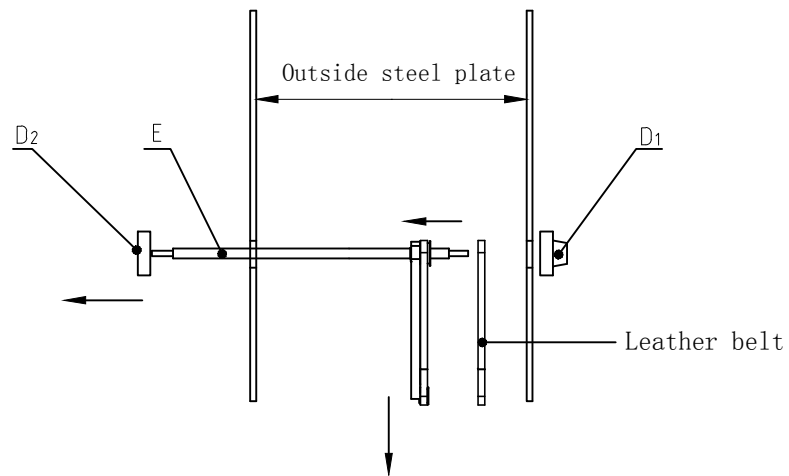
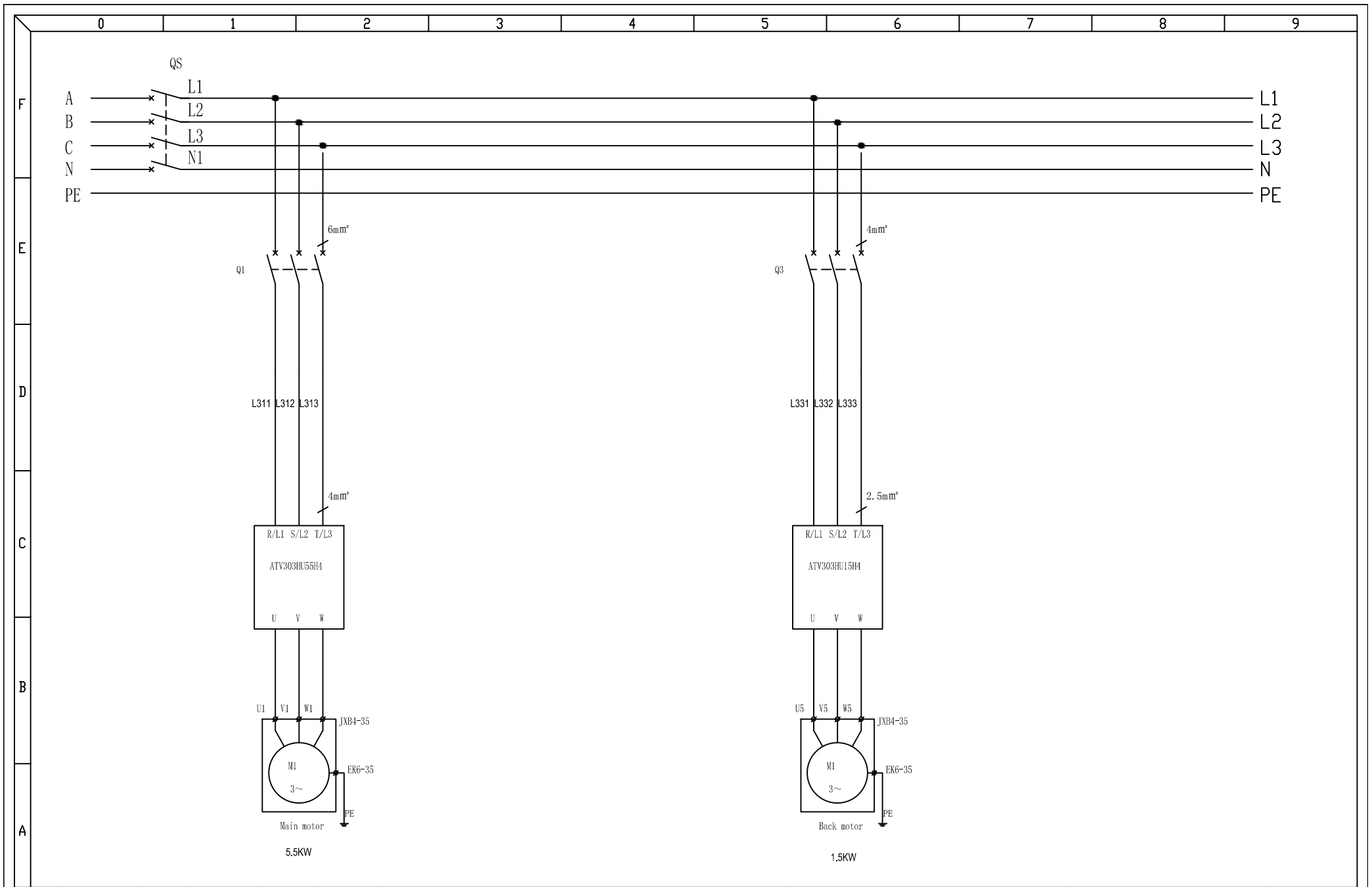


Fig 5-2

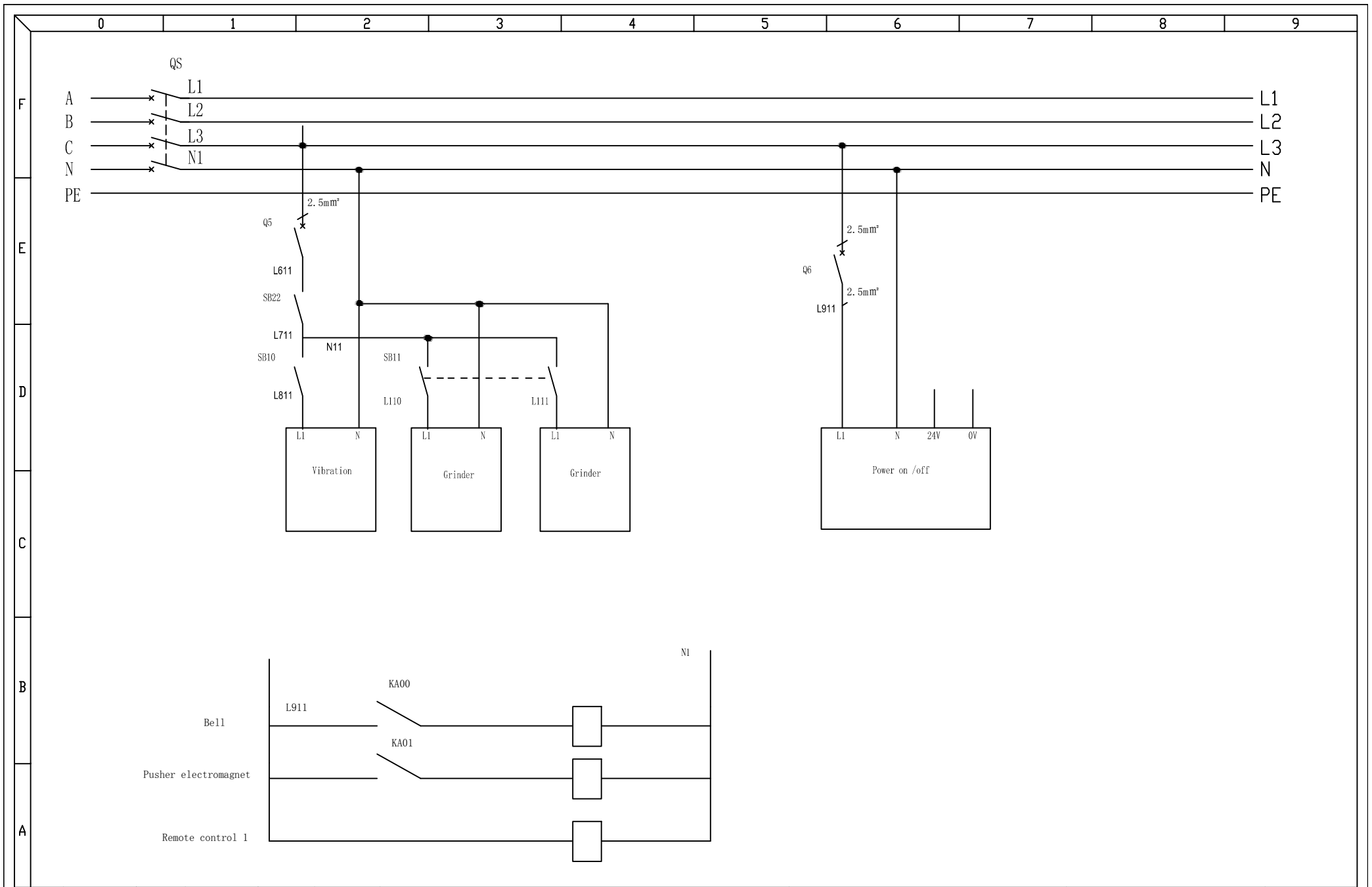
### 5-5 Step of replacement of folding unit

- ① Press down the jiggle bar (B) to raise subassemblies of folding unit, separate the folding base by jiggle bar b, see Fig.5-1.
- ② Loosen bearing D2, fetch out the shaft level E, loosen the tightening screw F (Fig.2-1-F). Take the belt out and replace it, see Fig.5-2. Then reset the position of each part as original. And fasten them.





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F

E

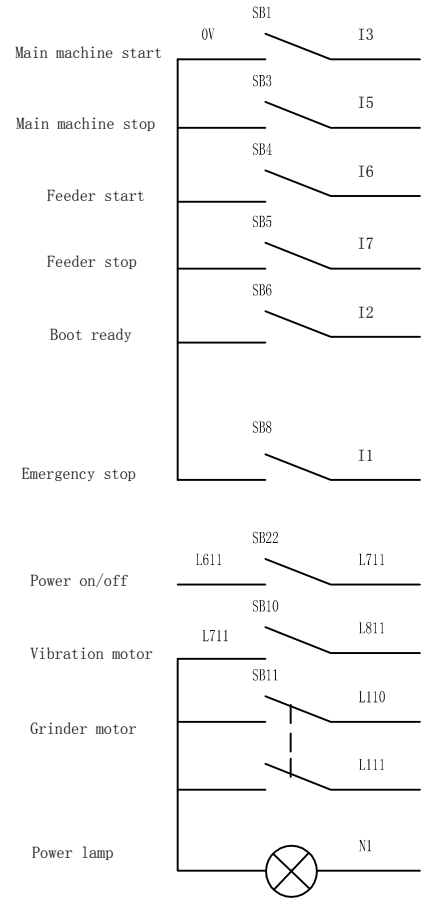
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C

B

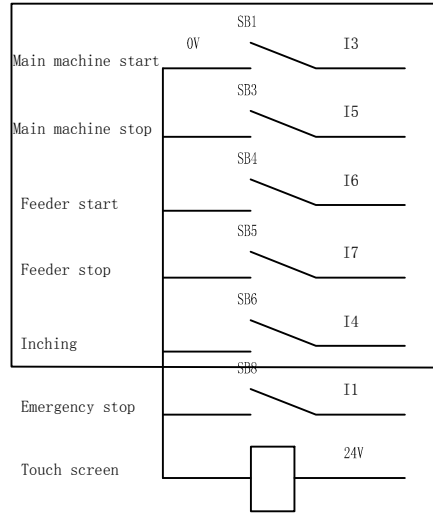
A

The Front control panel

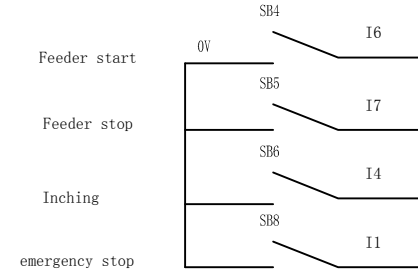


The Intermediate control panel

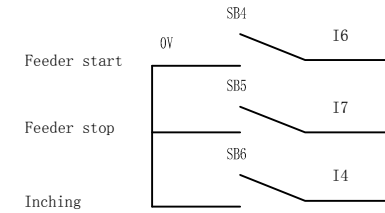
remote control control panel



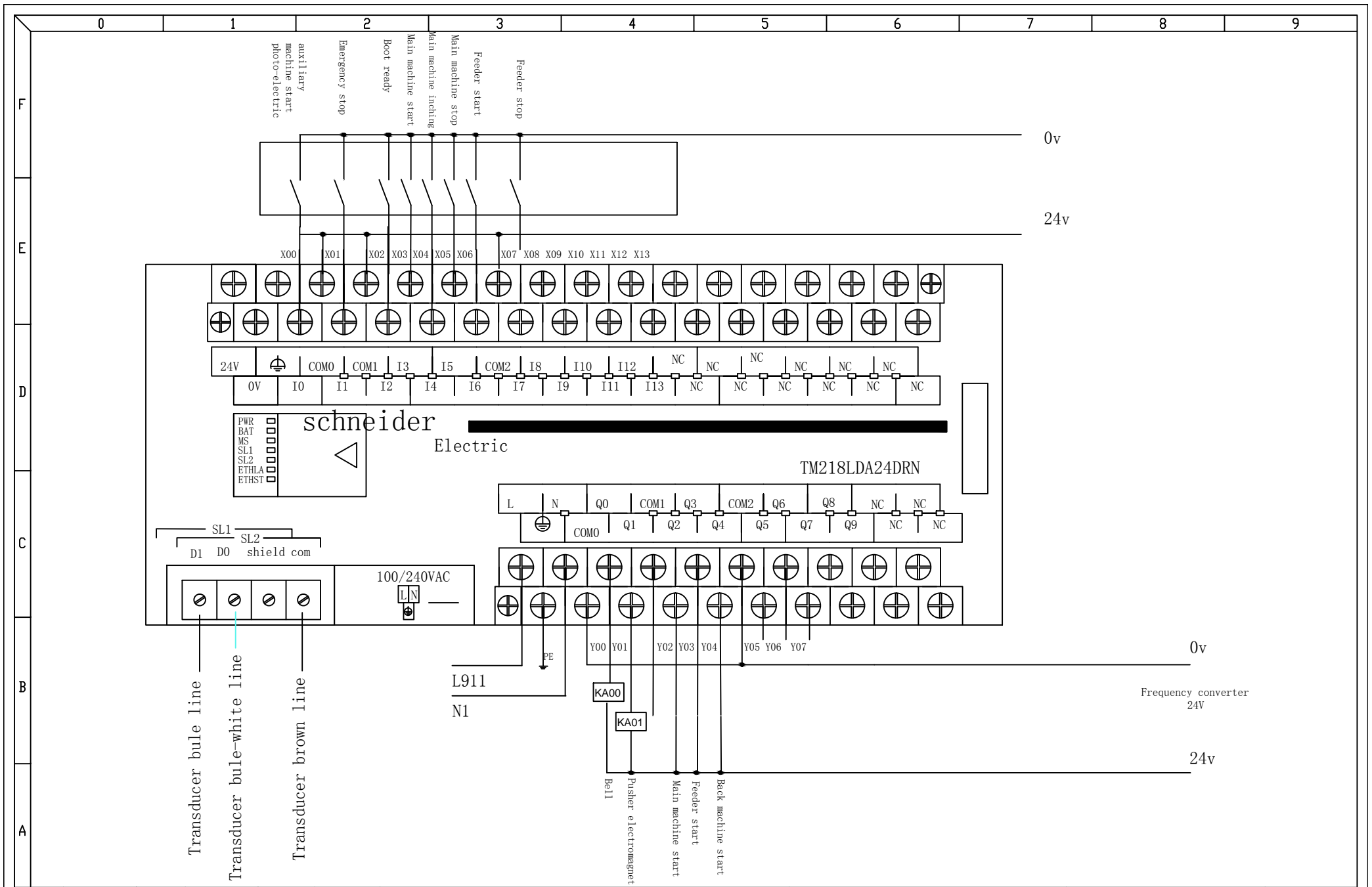
The intermediate control box



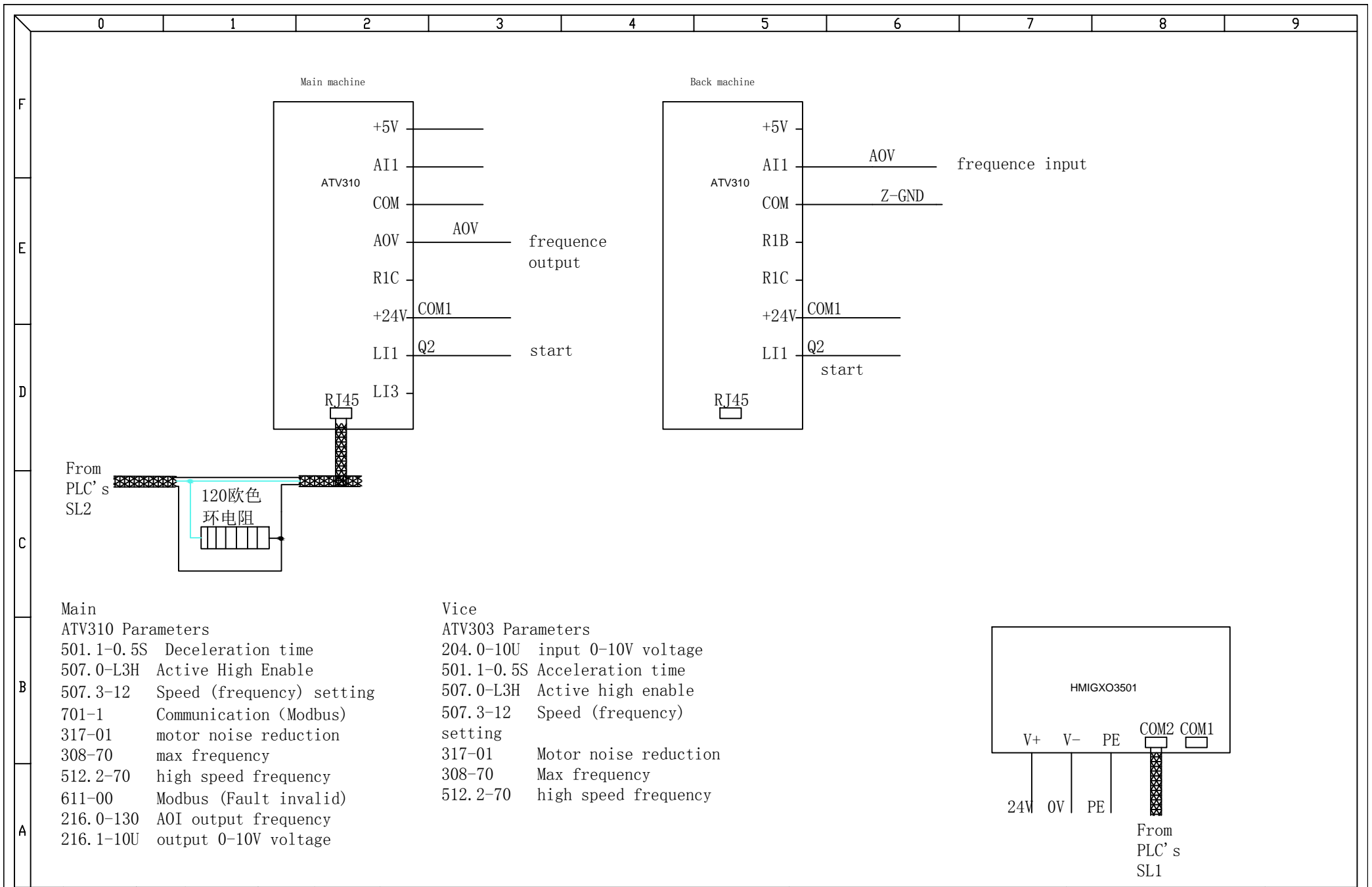
The intermediate control box



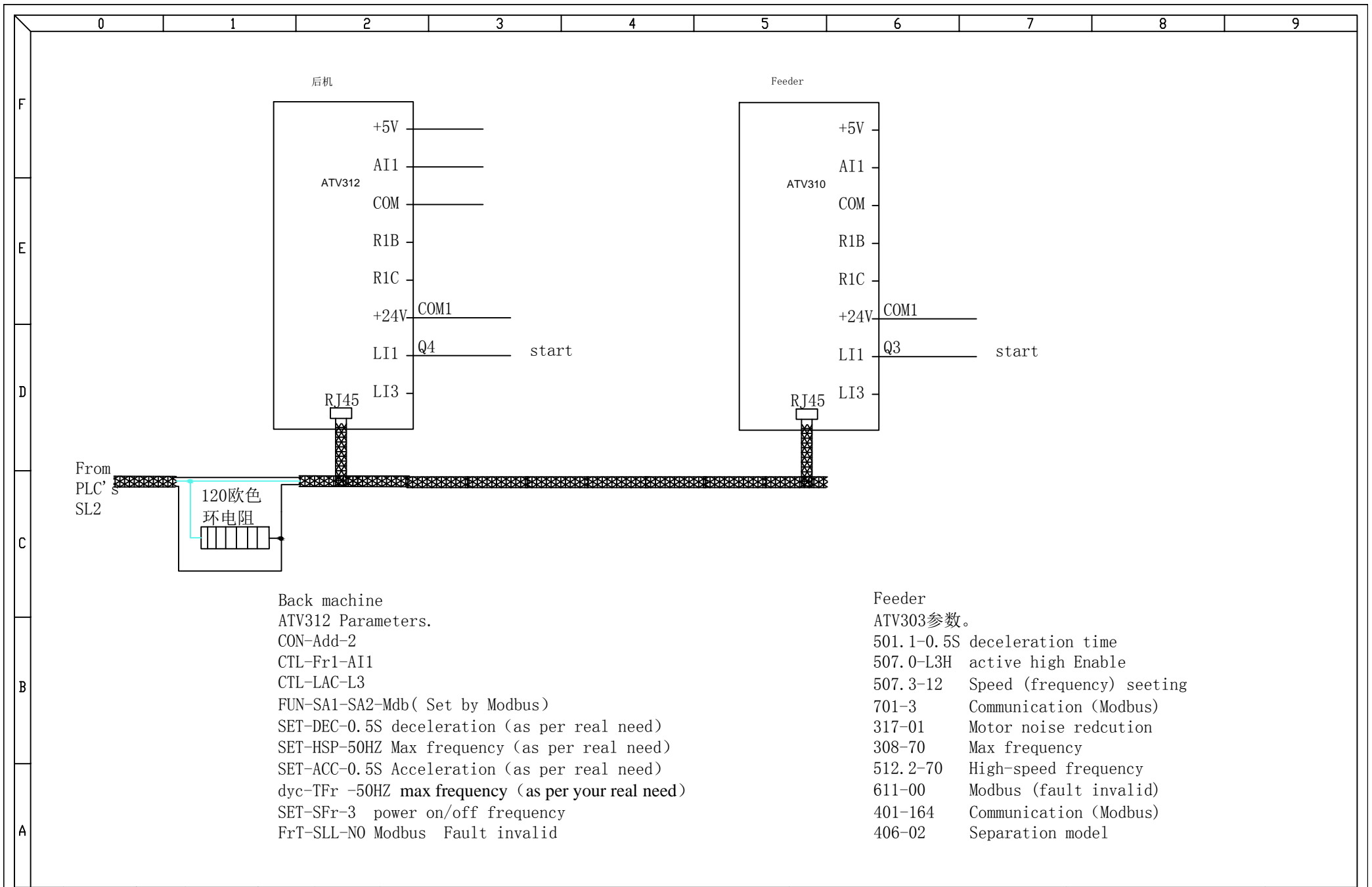
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Back machine  
 ATV312 Parameters.  
 CON-Add-2  
 CTL-Fr1-AI1  
 CTL-LAC-L3  
 FUN-SA1-SA2-Mdb (Set by Modbus)  
 SET-DEC-0.5S deceleration (as per real need)  
 SET-HSP-50HZ Max frequency (as per real need)  
 SET-ACC-0.5S Acceleration (as per real need)  
 dyc-TFr -50HZ max frequency (as per your real need)  
 SET-SFr-3 power on/off frequency  
 FrT-SLL-NO Modbus Fault invalid

Feeder  
 ATV303参数。  
 501.1-0.5S deceleration time  
 507.0-L3H active high Enable  
 507.3-12 Speed (frequency) setting  
 701-3 Communication (Modbus)  
 317-01 Motor noise reduction  
 308-70 Max frequency  
 512.2-70 High-speed frequency  
 611-00 Modbus (fault invalid)  
 401-164 Communication (Modbus)  
 406-02 Separation model

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