Veneer Splitter

USER'S MANUAL

CONTENTS

1.Basic Information

2.Manufacturer & After-Sales Support

3.Safety Declaration & Warning

4.Manual Description

5.Machine Overview

6.Core Component Functions

7.Operation Procedures

8.Electrical Schematic Diagram

9.spare parts list

10.Daily Maintenance

1.Basic info

1.1 the core date of machine

info

model SP400/SP700

input power 380V 50HZ

manufactory Huzhou Ranow Hi-tech Machinery Co., Ltd.

adopted stradran A. CE safty declaration and MD directives

B. ISO 19085-11:2024《木工机械 — 安全 — 第 11 部分：组合机床》

1.2 CE Declaration of Conformity

DECLARATION OF CONFORMITY

THIS IS HEREBY DECLARED THAT FOLLOWING DESIGNATED PRODUCT COMPLIED WITH THE ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF 2006/42/EC、2014/35/EU、2014/30/EU ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO IT. 、

APPLICANT'S NAME AND ADDRESS:

NAME: HUZHOU RANOW HI-TECH MACHINERY CO LTD.

ADDRESS:11-101 BUILDING N0.51 XIWAN LINGHU NANXUN HUZHOU ZHEJIANG CHINA

NAME AND ADDRESS OF MANUFACTURER:

NAME: HUZHOU RANOW HI-TECH MACHINERY CO LTD.

ADDRESS : 11-101 BUILDING N0.51 XIWAN LINGHU NANXUN HUZHOU ZHEJIANG CHINA

DESCRIPTION OF MACHINERY:

PRODUCT NAME: veneer splitter machine

Trademark / brand : RANOW

MODELTYPE: SP400/SP700

APPLICABLE STANDARDS:

EN ISO 12100:2010

EN 60204-1:2018+A1:2025

EN IEC 61000-6-4:2019

EN IEC 61000-6-2:2019

CE THIS DECLARATION APPLIES TO ALL SPECIMENS MANUFACTURED IDENTICAL TO THE MODEL SUBMITTED FOR TESTING / EVALUATION. ASSESSMENT OF COMPLIANCE OF THE PRODUCT WITH THE REQUIREMENTS RELATING TO SAFETY STANDARDS LISTED ABOVE WAS PERFORMED BY MANUFACTURE.SIGNED ON BEHALF OF：HUZHOU RANOW HI-TECH MACHINERY CO LTD.

1.3. This equipment fully complies with the 6 core safety dimensions of the ISO 19085-11:2024 standard, with specific requirements as follows:

Risk Assessment and Design Principles (Basic Requirements): A full-process risk assessment was completed during the equipment design phase to avoid hazards such as mechanical pinching injuries and electrical leakage.

Protective Device Requirements: Moving components (e.g., composite rollers, winding shafts) are equipped with protective covers, which are automatically locked in the non-operating state.

Operational Safety Specifications: Only trained personnel are permitted to operate the equipment; the safety status must be confirmed before starting the equipment.

Maintenance and Repair Safety: During maintenance or repair, the main power supply must be disconnected and the "Do Not Switch On" sign must be posted. Repair of key components requires manufacturer authorization.

Warning Signs: Prominent safety warning labels (in both Chinese and English) are posted in the equipment's hazardous areas (e.g., drying oven, glue application rollers).

Personnel Training and Emergency Response: The manufacturer provides operational training; this manual is attached with emergency shutdown procedures and contact information for fault handling.

2. Welcome & Company Introduction

Thank you for choosing products from RANOW Equipment. Throughout the full-cycle usage, the stable performance and excellent functionality of RANOW Equipment will bring you peace of mind and convenience.

Huzhou Ranow HI-TECH machinery co.,ltd. has always adhered to the concept of "pursuit of details" in R&D and production, integrating "designs that meet production needs" and "equipment stability" into all aspects of production management. We attach great importance to user experience: designated personnel conduct regular customer visits, and users' needs and suggestions are timely fed back to the R&D team—this is the core driving force behind the company's sustained and rapid development. The company's main products include: Wood Veneer Finger Jointing Machines, Wood Veneer Laminating Machines, Wood Veneer Sanding Machines, Wood Veneer splitter, Wood Veneer Joining Machines, etc. All equipment is manufactured in compliance with EU CE safety standards to ensure durability and safety.

3. Safety Declaration & Warning

3.1. general safety rules

The design, manufacturing and inspection of this equipment fully comply with ISO 19085-11:2024 and EU CE safety standards (such as 2006/42/EC). Any operation, maintenance or repair work must be performed by professionally trained and qualified personnel, and all provisions of this manual must be strictly abide by. Improper operation may result in equipment damage, fire or personal injury (e.g., pinching, scalds, electric shock), which must be taken seriously**.**

For your own safety, read the user's manual carefully. Learn its application and limitations as well as specific potential hazardspertinent to this machine.Do not attempt to operate until you have read thoroughly and understand completely all instructions,rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Keep USER's manual and review frequently for continuous safe operation.

3.2 mandatory safty requirement

Before operation, protective equipment must be worn: non-slip gloves (to avoid glue contamination and mechanical scratches), safety goggles (to prevent glue splatters), and heat-resistant aprons (to prevent scalds in the drying oven area).

When the equipment is in operation, it is prohibited to insert hands, tools, or other foreign objects into moving parts (such as composite rollers, winding shafts, or inside the drying oven). When the drying oven is in operation, its surface temperature can reach 80-120℃. Do not touch the oven's outer casing to prevent scalds. Before repairing or cleaning the equipment, the main power supply must be disconnected and the plug must be unplugged. Meanwhile, a "Do Not Switch On" sign must be posted.

If the equipment malfunctions (e.g., abnormal noise, smoke, or glue leakage), immediately press the emergency stop button (red, located in a prominent position on the main operation panel), disconnect the power supply, and contact after-sales service. Do not stack flammable and explosive materials (such as alcohol, thinners) near the equipment.

A dry powder fire extinguisher must be provided in the drying oven area.

So you have to follow the below key instructions

*KEEP GUARDS IN PLACE AND IN WORKING ORDER. REMOVE ADJUSTING KEYS AND WRENCHES.

For habit of checking to see that keys and adjusting wrenches are remove from the machine before turning it on.

*KEEP WORK AREA CLEAN.

Cluttered areas and benches invite accidents.

*DO NOT USE IN DANGEROUS ENVIRONMENTS.

Do not use power tools in damp or we locations, or expose them to rain. Keeps work area well illuminated.

*KEEP CHILDREN AWAY.

all visitors should be kept at a safe distance from work area.

*MAKE WORKSHOP CHILDPROOF.

with padlocks, master switches, or by removing starter keys.

*DO NOT FORCE THE MACHINE.

It will do the job better and be safer at the rate for which it was designed.

*USE THE RIGHT TOOLS.

Do not force the machine or attachments to do a job for which they were not designed.

*WEAR PROPER APPAREL.

Avoid loose clothing, gloves, neckties, rings, bracelets, or jewelry, which could be caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

*SECURE WORK.

use clamps or a vice to hold work when practical. It is safer than using your hand and frees both hands to operate the machine.

*DO NOT OVERREACH.

keep proper footing and balance at all times.

*MAINTAIN MACHINE IN TOP CONDITION.

Keep machine clean for best and safest performance. Follow instructions for lubricating and changing accessories.

* DISCONNECT MACHINE FROM POWER SOURCE.

before servicing and when changing accessories, or when mounting and remounting motor.

*USE RECOMMENDED ACCESSORIES.

consult the owner's manual for recommended accessories.

*NEVER LEAVE MACHINE RUNNING UNATTENDED.

When the power is turned off, do not leave the machine until it comes to complete stop.

*AVOID ACCIDENTAL STARTING. Make sure switch is in “ OFF ” position before plugging in cord. Never clean or remove chips while the machine is running.

*WARNING LABELS.

do not remove or alter warning labels and replace any that become obscured.

4. Manual Description

4.1 manual purpose

This manual is a dedicated operation guide for the SP400/SP700 Veneer fleecing Machine, designed to help operators:Correctly understand the equipment structure and functions; Safely and standardizedly complete the composite production process; Master daily maintenance methods and common fault troubleshooting; Ensure the long-term stable operation of the equipment and produce high-quality continuous lengthened wood veneers.

4.2 scope of application

Applicable machines：SP400/SP700 veneer jointing machine；

Applicable person：equipment operators and maintenance personnel trained and certified by the manufacturer；

Applicable range：all kind of natural veneer & engineered veneer（thickness 0.25-0.80mm）。

4.3 important note

Before using the equipment for the first time, the operator must read and fully understand all contents of this manual. Starting the machine is prohibited if the operating procedures are not mastered. This manual must be stored in the designated document box next to the equipment for easy reference at any time, and must not be altered or lost.Equipment parameters (such as heating temperature, torque value) shall be adjusted according to the thickness of wood veneers and the type of glue. It is recommended to conduct small-batch test runs before the first production. If the content of this manual is updated, the manufacturer will notify through after-sales channels, and the latest version shall prevail.4.4. Packing and unpacking

4.41 general safety rule for machine unpacking

1. Pay special attention to the balance of the machine while lifting.
2. Use a forklift with sufficient loading capacity to lift the machine.
3. Have another person help guide the way when lifting the machine.
4. The forks of forklift must protrude from under the machine underside.
5. The forklift must only be driven by an experienced forklift driver.

4.42 the machine is loaded into a box. This box is made by plywood and steel. The plywood is belong to the treated wood. So it is no problem in any country importing control on fumigating .

4.43 the machine is packed with plastic film to avoid any humidity and dust. All moving parts are fixed firmly . there are two bolts screwed on the pallet to fix machine on the pallet.

4.44 please pay attention to the instruction label on the box. And find the front side (labeled with gravity) as the forklift side. Any other side can not be unload .adjust fork position at the gravity let the box keep horizontal while lift.

4.45 broken the front side(labeled with gravity) to open the box. Unscrew the bolts and unloaded machine with forkcar. The forkcar max.lift power must be exceed 3 tons.

5. Machine Profile

5.1 The wood veneer splitter machine is a high-performance continuous jointed veneer rolls device. Its core function is to: splitting the jointed veneer roll into definite width for purpose use.

It is consist of releaser/splitting shafts/rewinding etc.

There are a full set of splitting tools. 20 pieces blades/ 20 of 5 shims/20 of 2 shims/20 of 1 shims /50 pieces of driving wheels

The key expression of the splitter machine;

Wood veneer splitter machine—splitter specifically refers to the process of the rough width veneer roll into definite width , the finished one can be sold or used directly in furniture edge banding, wood door or window seal edge etc.

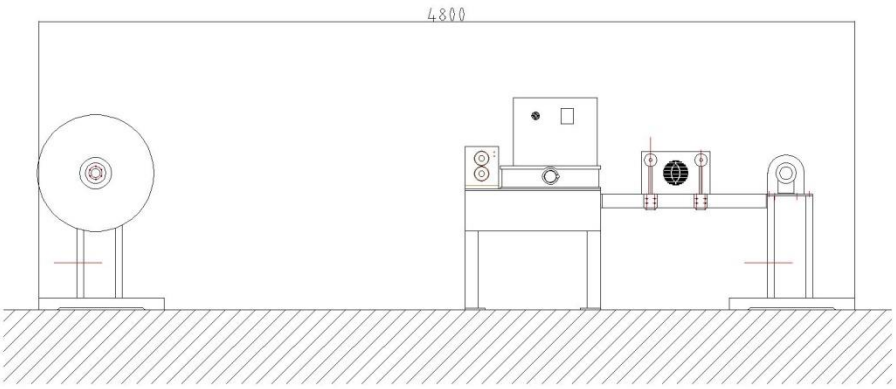
jointed veneer rolls— jointed emphasizes the process of connecting short wood veneer sections into a continuous strip, a key pre-processing step for continuous production.

5.2 overview of the veneer splitter machine

rewinder **splitter** **releaser**

5.3 .the primary installment

5.3.1 the requirement of the site space



Drawing 1

4800mm*1600mm(minimum required place)(refer to **drawing 1**)

5.3.2 the input press air

input pressure air—0.6Mpa (6 bars)

air flow rate—0.5-1CFM

5.3.3 connecting the power(No.10/11)

380V/50Hz

cable-- 5*1.5m2

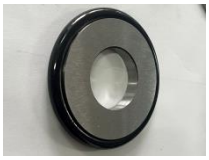
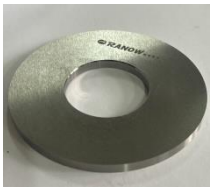
input power—1.85KW

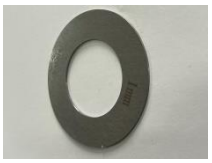
5.4 The production line consists of 3 core components, and the functions of each component are as shown in the table below:

component	Core function
splitter	Devide the veneer roll into definite width
releaser	Bracket the roght roll and feed into the splitter shsfts
Rewinding station	Winding the devided veneer roll

6. Introduction to Basic equipment function parts

No.	Photo	Basic function
1		The splitter main part consist of deviding shaft &plate of feeding
2		splitting shaft unit
3		Infeed balance shaft
4		control panel
5		counting meter

6		rewinding reverse switch
7		releaser shaft with 8 inch sleeve the air inflatable shaft is 3 inch in diamater
8		rewinding deveider
9		releaser dumper
10		main switch box
11		connection post
12		deveiding driving wheel
13		blade

14		1 mm shim
15		2 mm shim
16		5 mm shim
17		wrench

7. Operation Procedures

7.1 Installation of Wood Veneer jointed Roll

Pretreatment

After finger-jointing(or fleecing/laminated). the wood veneer roll shall first be neatly arranged by a packing machine to prevent the roll from loosening and affecting lamination accuracy.

Core Adaptation

If you arrange the roll by the packing machine ,the core of the tube will be 3 inch. So you have to install it on the 3inch shaft (**No.7**)directly(take off the sleeveof 8 inch).

Securing the Roll

Mount the roll on the unwinding shaft (**No. 7**) and adjust it to the centered position. Press down the foot switch to inflate the unwinding air expansion shaft, which clamps the roll (to prevent displacement during operation). Fasten the screw the knob to make the dumper in force (**No.9**).

Damping Adjustment

Adjust the "damping screw knob" (**No. 9**) to set an appropriate damping force—this ensures the unwinding speed matches the production line and prevents tension or slack of the roll.

Side of veneer roll

Choose any side of veneer roll on the shaft, the front side and back side. It is largely depand on the using purpose .

Key Terminology & Scene Adaptation Critical Term Accuracy

finger-jointing：Woodworking-specific term for joining wood pieces end-to-end with interlocking "finger" cuts, ensuring structural integrity of the roll.

unwinding shaft：Standard term in industrial unwinding systems (avoids ambiguity vs. "roll shaft").

unwinding air expansion sleeve：Industry jargon for inflatable sleeves that secure rolls of different core sizes, emphasizing its "air-expanded" function.

damping force：Mechanical term for resistance that controls unwinding speed (avoids "resistance force," which is too generic).

Action Description Precision

slide onto：Captures the smooth, vertical/horizontal movement of fitting the roll onto the shaft (more accurate than "put on").

Press down the foot switch：Reflects the hands-free operation common in production lines (specifies "press down" to distinguish from "toggle" or "press").

clamps the roll：Uses the active voice to clarify the air shaft’s function (avoids passive "the roll is clamped," which weakens process clarity).

7.2 intrudction of the tools and basic setting of them

there are 1 blade , 1 driving wheel and 3 kinds of shims in the tools set.

The blade (**No.13**) is used for splitting the veneer into definite width. The diameter is 93mm. the thickness is 5mm.

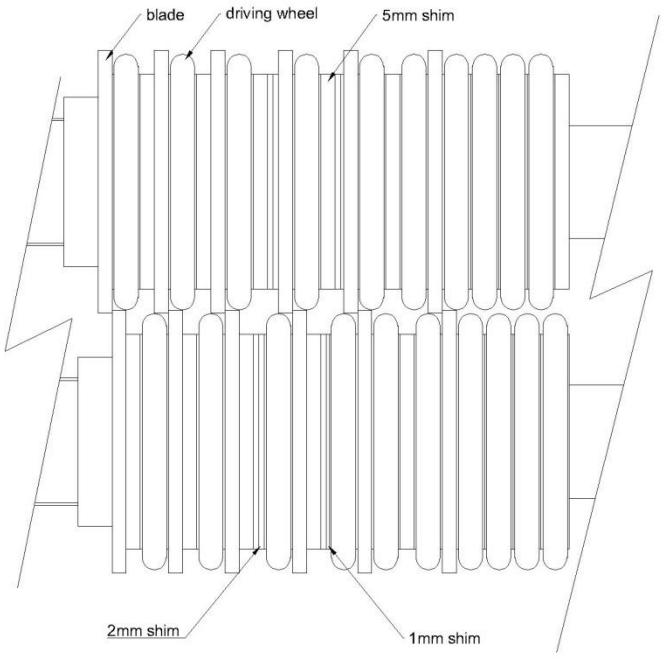
The driving (**No.12**)wheel is used for the forcing veneer roll moved forward. There is a rubble ring covered on the side of it. It is soft and elastik. The diameter is 93-94mm.

The shims are used for setting the width of the splitting. There are 3 kinds of 1/2/5mm each. (**No.14/15/16**)

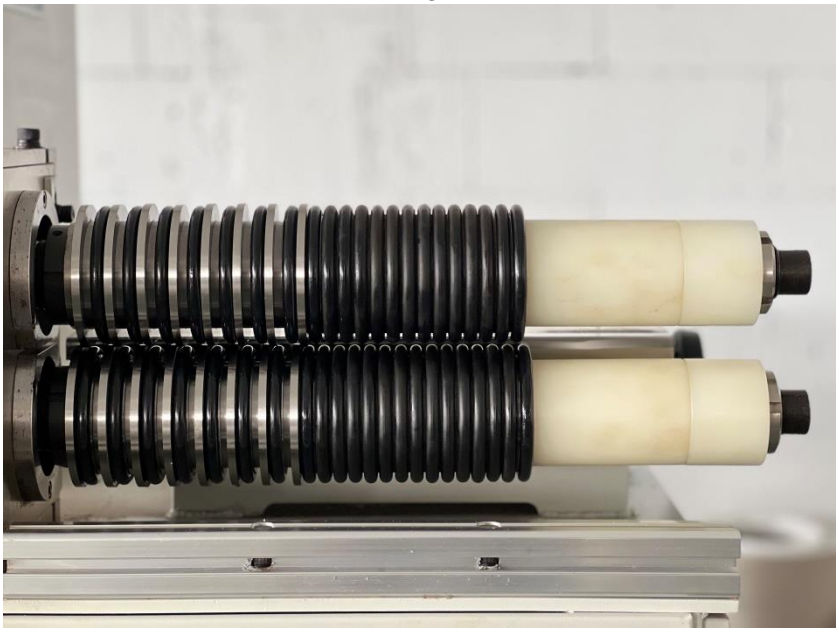
the shims achieve precise control over the splitting width by filling or adjusting the gap between the blade and other components, and they are key accessories in the tool set for adjusting dimensions.

In **drawing 2**, it is illustrated the basic setting of the blade & shims

Refers to the **drawing 3** for detail of setting and installment of splitting shaft



Drawing 2



Drawing 3

7.3 Operation

7.3.1. Installing and setting the blades

For more info of the blades of splitting ,refers to **7.2**

After the installment of the blades fasten the crew with wrench(**No.17**), the upper shaft of splitting screw is CCW ,the down one is CW.

pay attention to the force of the fasten; do not force too much on the screw fastening , the proper force is –let the all blades still without any slightly move.

Too much force on the shaft will cause the blades torn or even broken.

7.3.2. mount the roll

It is better to pack the jointed roll first. And mount it on the shaft of releaser . for more info refers to **7.1**

7.3.3 begin to split

Insert the trim of the veneer roll into the splitting shaft though safety handle (**No.1**),keep the side of roll align with ruler of the plate (**No.1**).

Switch on the start(**No.4**) to run the shaft , adjust the speed of the shaft to the proper speed for the beginning splitting .

When the first splitted edge banding reach to 3-3.5 meters, then insert the trim of the edge banding into rewinding shaft(**No.8**)

There is bar plugged on the devider (No.8). insert a little bit veneer and curve it , to let the veneer fix on the rewinding shaft.

Start the rewinding motor **(No.6)**, set the winding direction by the switch handle.

And setting the torque power on the control panel (**No.4**) to reach the proper rewinding force .

Put the counting meter down **(No.7)**to calculate the length.

7.4 uninstall the finished edge banding

When the veneer roll finished , stop splitter(**No.4/6**) and pull out the bar on the devider (**No.8**), collect the bandings one by one from the reach deveiders.

7.5 Shutdown Procedure

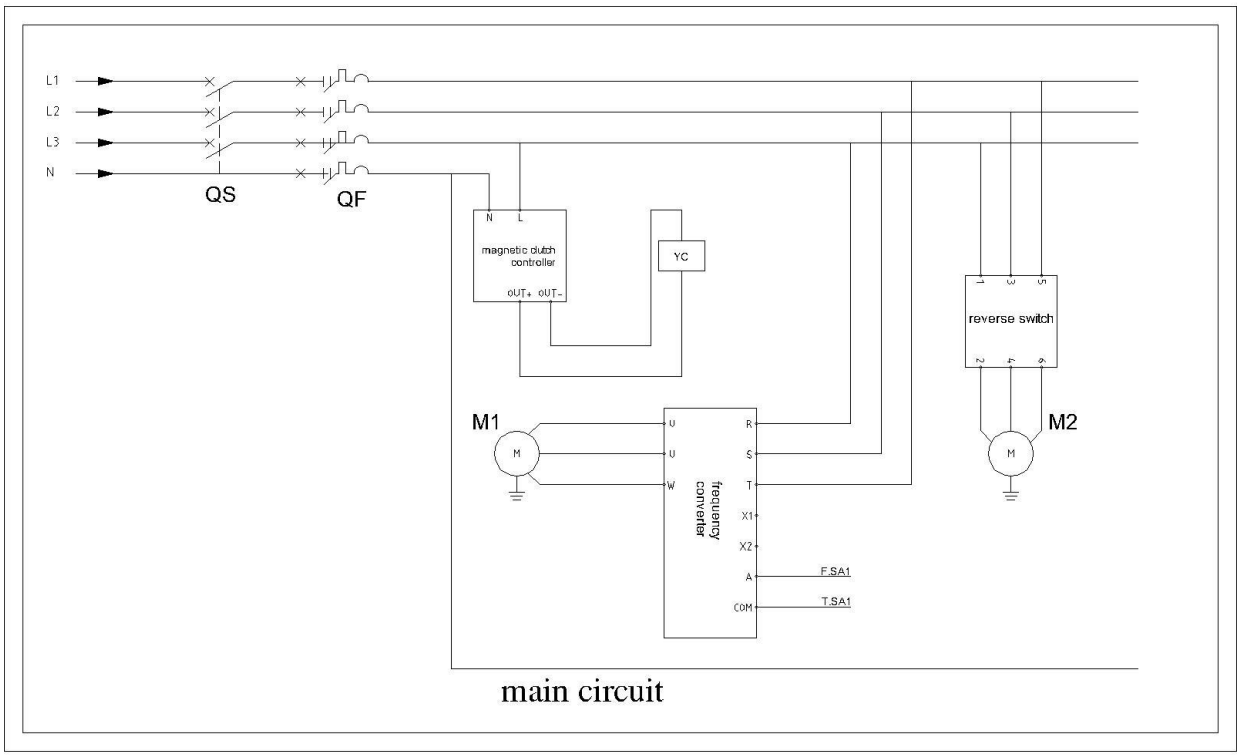
switch off (**No.4**)to let the releaser inflat.

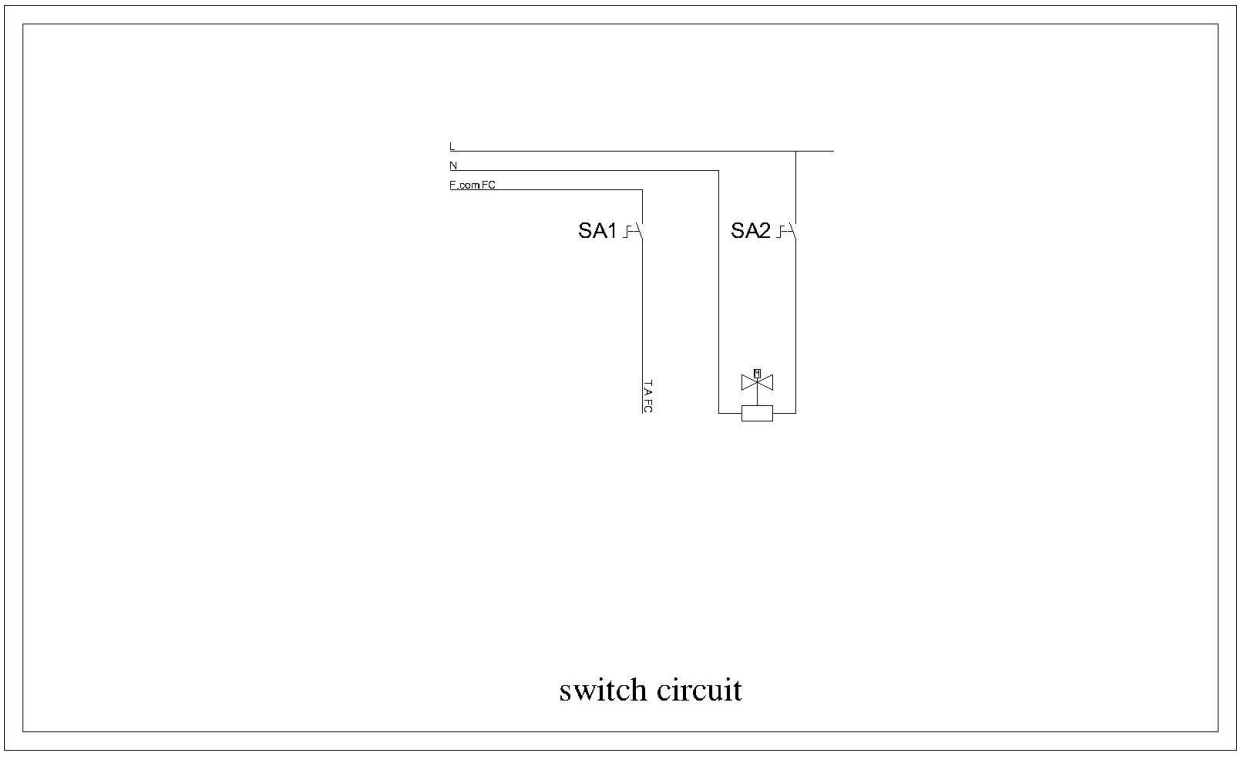
Roll up the counting meter

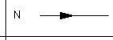
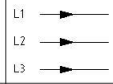
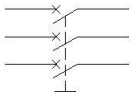
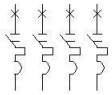
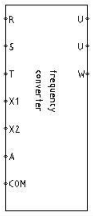
Switch off the power

Clear up all the scrap of the veneer

8. diagram


L1
L2
L3
N
QS
QF
N
L
magnetic clutch controller
OUT+ OUT-
YC
reverse switch
M1
M
U
V
W
R
S
T
X1
X2
A
COM
frequency converter
F.SA1
T.SA1
M2
M
main circuit


L
N
F.com FC
SA1
SA2
T.A FC
switch circuit

LEGEND 图例			
No.	Mark	symbol	definition
1		N	input power N
2			input power L
3		Q.S	CAM switch
4		Q.F	air switch
7		YV	solenoid valve
11		SA	switch
15		YC	magnetic clutch
19		M	motor
20		FC	frequency converter
23		RS	reverse switch
24		MCC	magnetic clutch controller

9 spare parts list

9.1 Electricity parts

No.	Parts	Specification	Quan.	Brand
EA2.1	start/stop motor switch 电机启动/停止开关	XA2ED25	1	Schneider Electric
EA2.1	Air inflatble switch 放卷气胀轴开关	XA2ED25	1	Schneider Electric
EA2.6	CAM switch 万能转换开关	VCD0C	1	Schneider Electric
EA2.46	Rewinder shaft reverse switch 收卷倒顺开关	HY2-30	1	DELIXI ELECTRIC
EA2.50	rewinding shaft magnetic clutch 收卷磁粉离合器	双轴磁粉离合器 2.5KG（25nm）	1	
EA2.51	rewding shaft magnetic clutch controller 离合控制器	KTC800A	1	
EA2.25.4	fleecing machine air switch 空气开关	iC65N D25A 4P	1	Schneider Electric
EA2.32	common barrier 通用挡板	D-UK2.5B， 1.5N	N/M	PODDUX
EA2.38	rewinder station motor 收卷传动电机	GH-28-750-10-S ,键 8	1	
EA2.38	splitting motor 收卷传动电机	GH-28-750-10-S ,键 8	1	

10.Daily Maintenance

10.1 Daily Maintenance (to be performed after shutdown)

Cleaning--Wipe the glue application roller, glue adjustment roller, and composite cold roller with a cloth to remove residual glue;

Clean the glue tank, rinse it with clean water, and then wipe it dry.

Inspection-- Protective covers: Ensure there is no looseness or damage to the protective covers of all moving parts;

Cables: Check that the aviation plugs and cable connections are secure, with no damage to the outer sheath;

Air-expanding shaft: After inflation, check for air leakage (apply soapy water to the joints; no bubbles indicate normal operation);

Lubrication--Add a small amount of lubricating oil (Type: No. 3 Lithium-Based Grease) to the bearings of the unwinding shafts and winding shafts, with approximately 5ml of oil per bearing.

10.2 Weekly Maintenance (recommended to be performed on weekends)

Inspect glue application rollers and composite rollers: Ensure there are no scratches or deformation on the roller surfaces. For minor scratches, polish with 800-grit fine sandpaper;

Inspect drying oven heating tubes: Open the drying oven door and confirm that all 6 heating tubes heat normally (no blackening or breakage). Replace any faulty tubes (Type: 220V 1kW);

Inspect magnetic powder torque controller: Adjust the torque knob and observe whether the tension of the winding shaft is uniform. If there is significant tension fluctuation, clean the magnetic powder inside the controller (or contact after-sales service for replacement);

Tighten screws: Check all fixing screws of the equipment (e.g., glue spreader brackets, laminating machine base) and tighten any loose screws with a wrench.

10.3 Monthly Maintenance

Inspect motors: Touch the motor housings (glue application motor, laminating motor, winding motor) by hand to confirm no abnormal heat (normal temperature ≤ 60℃), and listen for no abnormal noise during motor operation;

Inspect emergency stop buttons: Press the emergency stop buttons to confirm the equipment shuts down immediately, and restarts normally after reset (ensure the emergency stop function is effective);

Calibrate temperature: Use an infrared thermometer to detect the internal temperature of the drying oven, and compare it with the temperature displayed on the control cabinet. If the error exceeds ±5℃, contact after-sales service to calibrate the temperature sensor;

Replace wear parts: If the surface of the glue application roller is severely worn (resulting in uneven glue application), replace the glue application roller

Manual Version & Copyright & Disclaimer

Manual Version: V1.7.1(Updated in Feb 2023)

Disclaimer: The content of this manual is compiled based on the design parameters of the SP400/SP700 equipment. The manufacturer shall not be liable for malfunctions caused by equipment modification or the use of non-original accessories.