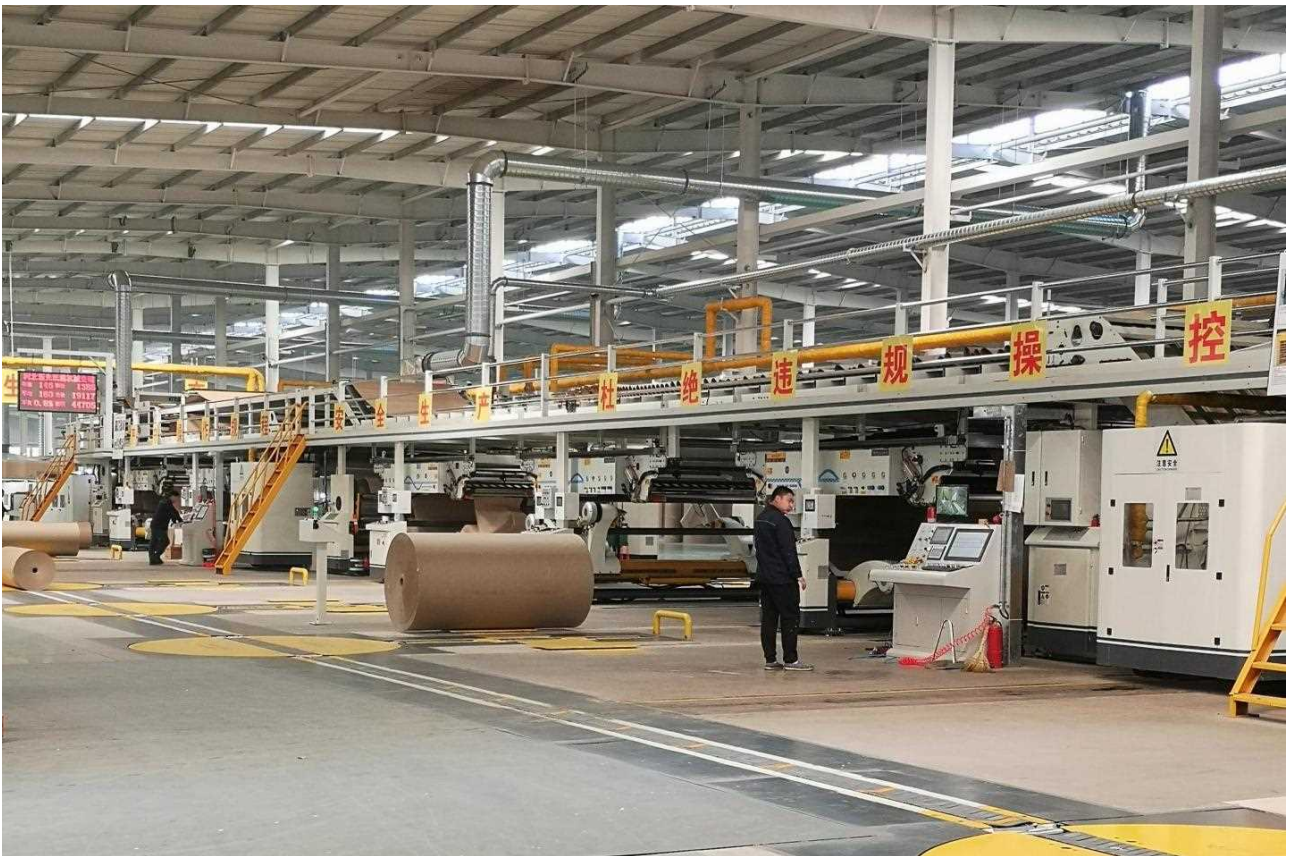


WJ200-2200- II type five layer corrugated cardboard production line

Business quotation § technical parameters



河北新光纸箱机械制造有限公司

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Main technical parameters and requirements in production line

Type: WJ200-2200- II type five layer corrugated paperboard production line:

| | | | | | |
|------|--|---|---------------------------------------|----------------------------|--------------|
| 1 | Effective width | 2200mm | 2 | Design produce speed | 200m/min |
| 3 | Three layer economic speed | 150-180m/min | 4 | Five layer economic speed | 120-160m/min |
| 5 | Seven layer economic speed | ----- | 6 | Maximum order change speed | 100m/min |
| 7 | Longitudinal separation accuracy | ±1mm | 8 | Cross-cutting precision | ±1mm |
| note | Speed the above targets required to achieve : effective width2200mm , Comply with the following standards and ensure the paper's equipment condition 175 °C heating surface temperature. | | | | |
| | Top paper index | 100g/m ² --200g/m ² | Ring crush index (N.m/g) ≥8 | (Water containing8-10%) | |
| | Core paper index | 80g/m ² --160g/m ² | Ring crush index (N.m/g) ≥5.5 | (Water containing8-10%) | |
| | In paper index | 90g/m ² --160g/m ² | Ring crush index (N.m/g) ≥6 | (Water containing8-10%) | |
| 9 | Flute combination | | | | |
| 10 | Steam requirement | The maximum pressure 10kg/cm ² | Common pressure8-10kg/cm ² | use4000kg/Hr | |
| 11 | Electricity demand | AC380V 50Hz 3PH | | | |
| 12 | Compressed air | The maximum pressure 8kg/cm ² | Common pressure5-7kg/cm ² | use1m ³ /min | |
| 13 | Space | ≈L _{min} 80m*W _{min} 10m*H _{min} 5m(The actual drawing to provider to provide audited prevail) | | | |

Customer owned section :

- 1、 Steam heating system: proposal with 4000Kg / Hr of a steam boiler. Pressure:1.25Mpa steam pipeline.
- 2、 Air compressed machine、 air pipeline、 glue conveying pipe.
- 3、 Power
- 5、 Water, electricity, gas flush mounting civil foundation.
- 6、 Test with the base paper、 corn starch (potato)、 Industrial use caustic soda、 borax and other material.
- 7、 Oil equipment、 lubricating oil、 hydraulic oil、 lubricating grease.
- 8、 installation、 commissioning of food, accommodation。 And provide installers with the installation.

Corrugated machine project list

WJ200-2200- II type five layer corrugated paperboard production line

| Specifica tion | Equipment name | QTY | | Remark |
|-------------------|---|-------------|--|---|
| ZJ-V5B | Hydraulic shaftless mill roll stand | 5set | | Spindle \varnothing 240mm , hyperbolic heavy rocker, expansion type chuck , multi-point brake, hydraulic drive lifting, panning left and right on the middle. |
| DXC | Electric loading trolley | 10set | | Electric trolley, double guide rail length is 9000mm, welded by middle plate. |
| JZJ | Automatic splicer | 5set | | Automatic splicer keep corrugating cardboard assembly line uninterrupted work, Reduce paper consumption, Greatly improve productivity. Maximum speed 200m/min |
| R09B | Top paper preheat cylinder | 2set | | Roller \varnothing 900mm, including pressure vessel certificate. Adjust the wrap angle electrically. The wrap angle can adjust the heated area of the paper within 0-270°. |
| R06B | Core paper preheat cylinder | 2set | | Roller \varnothing 600mm, including pressure vessel certificate. Adjust the wrap angle electrically. The wrap angle can adjust the heated area of the paper within 0-270°. |
| SF-360E A | Cassette Single facer | 2set | | Main corrugating roller \varnothing 360mm , corrugating roller group flute quick change. corrugated roller with spraying tungsten carbide dealing. with maintenance-free airbag loading, PLC automatic control glue, HMI touch screen, Breaks automatic parking relief. |
| DY-C | Electric hydraulic roller change forklift | 1set | | Large capacity battery, power walking, hydraulic lift, centralized control. |
| MK-360 | Corrugating roller quick change Module | 2set | | Corrugating roller diameter: 360mm , with tungsten carbide dealing , Modules including : Both ends of the shaft seat 、 bearing 、 steam element 、 Suction box 、 Pneumatic components assembly. |

| | | | | | |
|--------|---------------------------------------|------|--|--|---|
| R09B-3 | Tripe preheater | 1set | | | Roller \varnothing 900mm, including pressure vessel certificate. Adjust the wrap angle electrically. The wrap angle can adjust the heated area of the paper within 0-270°. |
| GM-20 | Double glue machine | 1set | | | The diameter of the glue roller is 268mm. Each layer is driven by an independent variable frequency motor, and the PLC adjusts the glue gap and human-machine interface. |
| TQ25-2 | Conveyor bridge | 1set | | | The national standard 250 channel steel, 150H steel, 63 angle steel and other connections are used, and the independent frequency conversion motor drives the paper to lift and convey. |
| XG-JP | Automatic correction | 1set | | | No power correction model save energy.High precision sheet correction. Paper width change does not require any adjustment Full width infrared detection curtain。Reduce paper waste generated tear 。 reduce the waste of paper edge not to precision. |
| SM-F | Double facer | 1set | | | The frame is 360 mm national standard channel steel, chrome-plated hot plate 600 mm * 16 pieces, and the whole process hot pressing plate design structure. PLC automatically controls the platen. Temperature display, variable frequency motor.Cotton belt is with sides protection.With auto temperature controlling system. |
| | Corrugated flute heating system | 1set | | | |
| NCBD | NC thin blade slitter scorer | 1set | | | Tungsten alloy blade, seven-knife and twelve creasing, zero-crimping type. The full servo computer automatically arranges the knives, and the width of the air inlet is automatically adjusted. |
| NC-20 | Double layer NC cutter helical knives | 1set | | | Full AC synchronous servo control, energy storage brake, helical knife structure, alloy gear transmission, lubricating oil pressure protection, 10.4-inch touch screen display. |


| | | | | | |
|-------|---|------|--|--|--|
| DM-LM | Automatic big gantry stacking machine | 1set | | | Servo drive platform lift, four sections of frequency transmission, automatic points in batches, automatic stacking discharge, imported high-strength belt output, out paper side standard transport aircraft. |
| | Conveyor | | | | Including 2 sets of auto conveyor and 6m unpowered conveyor roller. |
| | Automatic small gantry stacking machine | | | | Servo-driven platform rises and falls, four-stage frequency conversion conveying, automatic counting and stacking discharge, imported high-strength belt output, and standard delivery frame on the paper side. |
| SG | Production Management System | 1set | | | Improve the automation of production lines, easy to operate. reduce consumption, Improve the utilization of the base paper, save costs. Automatic control production line, stable quality cardboard. Increase the average speed, Increase productivity. Automatic statistics production, Easy to keep control of the production line, improve efficiency. |
| ZJZ | Glue station system | 1set | | | The addition of all materials is set by the program, controlled by PLC, and the measurement is accurate. The system does not need to use stabilizers when making paste, and the paste has a strong penetration force, and the paste is stable and can be stored for a long time without stratification. |
| QU | Air source system | 1set | | | Customers provide their own air source. |
| ZQ | Steam system | 1set | | | Including steam components such as pipeline valves, traps, instruments, etc. in the equipment, the customer provides heat sources and pipelines. |
| DQ | Electrical control cabinet system | | | | Electronic control system: The adsorption type single-sided machine, the drive part, the double-sided machine, and the gluing machine all use variable frequency motors, and Delta's variable frequency control system. The operation interface is simple and convenient, and the speed display control cabinet is equipped with the functions of speed display of each unit, unit call, and emergency stop. |

Remarks:

- 1. NSK bearings as main bearings for the total line.**
- 2. Chucks for mill roll stand are expansion type.**
- 3. All the inverters brands are Delta.**
- 4. Cotton belt is with sides protection.(each side is 10-15cm) and auto temperature system.**
- 5. Including 3 sets of thin blades(21 pieces of thin blades) for NCBD slitter scorer as spare parts.**
- 6. Including 2 pairs NC cutter blades as spare parts.**
- 7. Including all the steam pipes and valves between boiler and corrugated cardboard production line.**
- 8. Including two years warrenty spare parts.**

1、ZJ-V5B Hydraulic shaftless mill roll stand

A、Technical parameters:

| | | |
|----------------------|--|--|
| Working wide | 2200mm |  |
| Paper diameter | MAX: 1500mm MIN:300mm | |
| Paper width | MAX: <u>2250mm</u> MIN: <u>1050mm</u> | |
| Weight capacity | <u>3 T</u> | |
| Paper head size | Teeth 3 inches 4 inches | |
| brake | Spur gear type 4 points pneumatic | |
| Working air pressure | 0.4---0.8Mpa | |

B、Main performance characteristics:

- ★Adopt hydraulic drive to complete the paper clamping, loosen, remove for the medium, translation left and right and others, the lifting of the paper adopts hydraulic drive.
- ★The brake uses a multi-point brake system, a gear disc structure, equipped with a cooling fan, Airtac pneumatic components, stable tension, and long life.
- ★The large-diameter spindle design, the swing arm slides smoothly, and the steel guide rails are treated with high frequency treatment, which is super wear-resistant.
- ★The hydraulic cylinder is installed on a twisted shaft, which does not bear radial force and is easy to maintain.

C、Hydraulic system parameters:

| Working pressure | Hydraulic cylinder working range | Hydraulic cylinder working range | Hydraulic station motor power | Solenoid valve working voltage |
|------------------|----------------------------------|----------------------------------|-------------------------------|--------------------------------|
| 16---18Mpa | ∅ 100×420mm | ∅ 63×800mm | 3.7KW --380V -- 50Hz | 220V--50 Hz |


D、Mainly purchased parts,raw materials and origin:

| Serial | Name of main parts | Brands or place of origin | Remarks |
|--------|--------------------|---------------------------|---------|
|--------|--------------------|---------------------------|---------|

| | | | |
|--------|---------------------------|--------------------------|--------------------------------|
| number | | | |
| 01 | Main shaft | TianJin steel production | ∅ 242mm |
| 02 | Swing arm | Production by own | Resin sand gray ironHT250 |
| 03 | Wallboard | Jigang production | Q235A Welding parts |
| 04 | Bearing | NSK | |
| 05 | Main electrical appliance | SIEMENS | Contactora, relay, button |
| 06 | Hydraulic station | 7 Ocean | Taiwan oil pump solenoid valve |

2、Electric Paper trolley

A、Technical parameters:

| | | |
|----------------------|--|---|
| Track length | 9000mm |  |
| Paper loading method | Electric | |
| Main frame | 18 channel steel and ∅ 20mm cold drawn round steel | |

B、Structural feature:

- ★The web is automatically up and down. Electric push to the position.
- ★The whole track is buried. The main frame is No. 18 channel steel. I-beam is welded with ∅20mm cold drawn round steel. The length of the guide rail is 9000mm.
- ★Each paper holder with two paper carts can feed paper from both sides at the same time.

C、Mainly purchased parts, raw materials and origin

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|-------------------------|---------------------------|--------------------------------------|
| 01 | Track and paper trolley | TangShang or JiNan | NO18 channel steel、Q235A、steel strip |
| 02 | Bearing | C&U | |

3、High-speed automatic splicers

A、 Technical parameters:

| | | |
|------------------|----------|--|
| Working wide | 2200mm |  |
| Link paper speed | 200m/min | |
| Air pressure | 6 bpa | |
| | | |
| | | |

B、 Structural feature:

- ★The maximum diameter of the applicable paper: 1500mm.
- ★With the automatic tension control of the original paper holder, the paper can be picked up at high speed and the success rate is high.
- ★No tail paper receiving, reducing paper consumption (only partially overlapping paper tape with a width of 40mm).
- ★When paper car take out, the automatic turn out, and the vacuum adsorption, easy paper loading, automatic tension control paper receiving zero turnovers.
- ★All PLC automatic control, accurate, less failure, easy maintenance.
- ★The first round of the buffer when you pull the paper, automatic alignment, easy to pull paper.
- ★Machine superiority cylinder control speed splicers paper receiving moment does not appear normal motor control of rubble, blistering.
- ★Paper receiving highest speed of 200 m / min.

C、 Main component parameters:

| Craftsmanship Part name | Specification | Material | Surface treatment |
|----------------------------|---------------|-----------|-----------------------|
| Upper paper guide shaft | ∅ 137mm | 45# steel | Round grinding chrome |
| Lower paper guide shaft | ∅ 150mm | 45# steel | Round grinding chrome |
| Buffer reel guide roller 1 | ∅ 126mm | 45# steel | Round grinding chrome |
| Buffer reel guide roller 2 | ∅ 137mm | 45# steel | Round grinding chrome |
| Pinch paper roller | ∅ 99mm | 45# steel | Round grinding chrome |
| Hold paper roller | ∅ 99mm | 45# steel | Round grinding chrome |
| | | | |

D、 Mainly purchased parts, raw materials and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|--|---------------------------|--------------------|
| 01 | Breaker | Schneider | |
| 02 | Contactora | Schneider | |
| 03 | Relay | Schneider | |
| 04 | Left and right conversion solenoid valve | Japan SMC | |
| 05 | Precision pressure regulator | Japan SMC | |
| 06 | Electric proportional valve | Japan SMC | |
| 07 | Speed increase relay | Japan SMC | |
| 08 | Filter | Japan SMC | |
| 09 | Wire rope | American Smurfs | Aviation equipment |
| 10 | Sealing ring | American Parker | |
| 11 | Proximity switch | Omron Japan | |
| 12 | PLC | Taiwan Delta | |
| 13 | Geared motor | Taiwan Takasaki | |
| 14 | The electromagnetic valve | TaiWan AirTAC | |
| 15 | Cylinder | STNC | |

4、R09B Top paper preheater

A、Technical parameters:

| | | |
|----------------------------|-----------|--|
| Working wide | 2200mm |  |
| Diameter of preheat roller | ∅ 900mm | |
| Angle adjustment range | 0-270° | |
| Angle shaft diameter | ∅ 110mm×2 | |
| Steam temperature | 200℃ | |
| Steam pressure | 1.2Mpa | |

| | |
|---------------|--------------------------------|
| Working power | 380V 50Hz 3PH |
| Motor power | 250W short (S2) working system |

B、Structural feature:

- ★Used for preheating single-sided corrugated paper and tissue paper to increase temperature, facilitate bonding, control moisture, and smooth cardboard.
- ★Each roller surface after grinding precision grinding and dealing with hard chrome plating, Surface friction is small, durable.
- ★Electric adjustment angle, and angle can rotation adjustment the preheat area in the range of 0-270°.
- ★The preheating roller adopts the flat head design, which complies with the national standard of Class I pressure vessels, and is accompanied by a pressure vessel certificate.

C、Mainly purchased parts, raw materials and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|----------------------------|-----------------------------|--------------------------------|
| 01 | Framework | Tang Steel Profile | Welded parts stress relief |
| 02 | Steam rotation joint | Quanzhou yujie | |
| 03 | Preheater | Hangang or jigang | Q235B pressure container board |
| 04 | Seat belt bearing | FuJian FGJ | |
| 05 | RV Reducer | Taiwan city-state or Wanxin | RV75 |
| 06 | Main electrical appliances | SIEMENS | Contactora, relay, button |
| 07 | Trap | BeiJing | Float |
| 08 | | | |

R06B Core paper preheater
A、Technical parameters:

| | |
|----------------------------|----------|
| Working wide | 2200mm |
| Diameter of preheat roller | ∅ 600mm |
| Angle adjustment range | 0-270° |
| Angle shaft | ∅ 85mm×2 |

| | | |
|-------------------|--------------------------------|--|
| diameter | |  |
| Steam temperature | 200°C | |
| Steam pressure | 1.2Mpa | |
| Working power | 380V 50Hz 3PH | |
| Motor power | 250W short (S2) working system | |

B、Structural feature:

- ★Used for preheating single-sided corrugated paper and tissue paper to increase temperature, facilitate bonding, control moisture, and smooth cardboard.
- ★Each roller surface after grinding precision grinding and dealing with hard chrome plating, Surface friction is small, durable.
- ★Electric adjustment angle, and angle can rotation adjustment the preheat area in the range of 0-270°.
- ★The preheating roller adopts the flat head design, which complies with the national standard of Class I pressure vessels, and is accompanied by a pressure vessel certificate.


C、Mainly purchased parts, raw materials and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|----------------------------|-----------------------------|--------------------------------|
| 01 | Framework | Tang Steel Profile | Welded parts stress relief |
| 02 | Steam rotation joint | Quanzhou yujie | |
| 03 | Preheater | Hangang or jigang | Q235B pressure container board |
| 04 | Seat belt bearing | FuJian FGJ | |
| 05 | RV Reducer | Taiwan city-state or Wanxin | RV75 |
| 06 | Main electrical appliances | SIEMENS | Contactora, relay, button |
| 07 | Trap | Bei Jing | Float |
| 08 | | | |

5、RG09B-3 Triple preheater

A、Technical parameters:

| | | | |
|----------------------------|----------------------------------|------|-----|
| Working wide | 2200mm | | |
| Diameter of preheat roller | Φ 900mm | | |
| Angle adjustment range | 270° | | |
| Angle shaft diameter | Φ 110mm×2 | | |
| Steam temperature | 200℃ | | |
| Steam pressure | 1.2Mpa | | |
| Working power | 380V | 50Hz | 3PH |
| Motor power | 250W short (S2) working system | | |



B、Structural feature:


- ★Used for preheating single-sided corrugated paper and tissue paper to increase temperature, facilitate bonding, control moisture, and smooth cardboard.
- ★Each roller surface after grinding precision grinding and dealing with hard chrome plating, Surface friction is small, durable.
- ★Electric adjustment angle, and angle can rotation adjustment the preheat area in the range of 360°.
- ★The preheating roller adopts the flat head design, which complies with the national standard of Class I pressure vessels, and is accompanied by a pressure vessel certificate.

C、Mainly purchased parts, raw materials and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|----------------------------|-----------------------------|--------------------------------|
| 01 | Framework | Tang Steel Profile | Welded parts stress relief |
| 02 | Steam rotation joint | Quanzhou yujie | |
| 03 | Preheater | Hangang or jigang | Q235B pressure container board |
| 04 | Seat belt bearing | FuJian FGJ | |
| 05 | RV Reducer | Taiwan city-state or Wanxin | RV75 |
| 06 | Main electrical appliances | SIEMENS | Contactora, relay, button |
| 07 | Trap | BeiJing | Float |
| 08 | | | |

6、SF-360E Cassette Single facer

A、Technical parameters:

| | | |
|-------------------|-------------------|--|
| Working width | 2200mm |  |
| Design speed | 200m/min | |
| Economic speed | 120-180m/min | |
| Paper feed range | 2250--1050mm | |
| Steam temperature | 200°C | |
| Steam pressure | 1.2Mpa | |
| Working power | 380V 50Hz 55KW | |

B、Structural feature:

- ★Main corrugating roller: ϕ 360mm (According flute differ) , pressure roller ϕ 415mm, preheat roller ϕ 400mm.
- ★Using negative pressure design, lower heat consumption, helps the core paper to press evenly and close to the surface of corrugated roller, make the corrugate molding better, because the pressure evenly, the top of corrugate can glue uniform and better, make the single corrugated paper have perfect laminating.
- ★Quickly change rollers in 10 minutes, while change corrugated roller with the electric trolley loading, put into the machine, and air pressure system will lock it, fixed to the machine base, only need a few buttons can complete the replacement quickly and easily.
- ★Corrugated roller adopt 50CRMO high quality alloy steel, dealing with heat, after grinding tungsten carbide surface treatment.
- ★Corrugated roller, pressure roller adopt airbag control system having high stability, having the barometric pressure control buffering effect at the same time.
- ★Glue volume control with electric adjustment, rubber septum electric device, the glue system can operate independently when the motor stops, prevent glue exhausted.
- ★The moveable type glue unit is convenient to clean and maintain.
- ★Easy operation control system, touch screen operation interface, Drawing with color display operating status, function selection, fault indication, and parameter settings, etc. can exclude exhibit this machine fully functional, easy to operate, user-friendly.
- ★Built-in pre-conditioner with proportional spraying device, adjustment the core paper temperature and moisture.
- ★Main, vice corrugating and pressure roller bearings are used in high-temperature grease to

ensure bearing life running smoothly.

C、Main component parameters:

| Part name | Specification | Material | Surface treatment |
|--------------------|------------------------|-------------|---|
| Corrugated roller | Main roll ϕ 360mm | 50CrMAo 合金钢 | Tungsten carbide treatment |
| Pressure roller | ϕ 415mm | 45# steel | Hardened round grinding chrome plating polishing |
| Glue roller | ϕ 269mm | 45# steel | Round grinding and pressing pit mesh chrome plating |
| Fixed paste roller | ϕ 153mm | 45# steel | Round grinding chrome |
| Preheat roller | ϕ 400mm | Q235B | Round grinding chrome |
| Paper guide roller | ϕ 110 mm | 45# steel | Round grinding chrome |

D、Main dynamic parameter:

| Name | Power | Voltage | Frequency |
|-----------------------------|--------|---------|-----------|
| Main drive motor | 30KW | 380V | 50HZ |
| High-pressure suction motor | 15KW | 380V | 50HZ |
| Adjustable glue push rod | 30W | 380V | 50HZ |
| Glue adjustment motor | 200W*2 | 380V | 50HZ |
| Rubber pump motor | 2.2KW | 380V | 50HZ |
| Motor of glue department | 3.7KW | 380V | 50HZ |

E、Main parts brand and origin:

| Serial number | Main part name | Brand or place of origin | Remarks |
|---------------|-----------------------------|-----------------------------|---------------------|
| 01 | Box rack | Self-produced | HT250 |
| 02 | Rotary joint and metal hose | FuJian | |
| 03 | Main drive motor | YongShun | 30KW Inverter motor |
| 04 | RV reducer | Taiwan city-state or Wanxin | |
| 05 | Bearing | NSK | |
| 06 | Seat belt bearing | FuJian | |
| 07 | High pressure fans | Shanghai yingfa | 15KW |
| 08 | Pneumatic Components | AirTac | |

| | | | |
|----|-----------------------------------|---------|----------------------------|
| 09 | The electromagnetic valve | AirTac | |
| 10 | Low-voltage electrical appliances | SIEMENS | Contactator, relay, button |
| 11 | Frequency controller and PLC | Delta | |
| 12 | Touch screen | MCGS | |

7、TQ25-2 Heavy type conveyor bridge

A、Technical parameters:

| | | |
|---------------|----------------|---|
| Working width | 2200mm |  |
| Design speed | 200m/min | |
| Bridge layer | 2 layer | |
| Working power | 380V 50Hz 13KW | |
| | | |

B、Structural feature:

- ★The part of the flyover is to lift the single-facer corrugated paper produced by the single-facer machine, lift it and transport it to the glue coating machine, apply the glue to the double-facer machine, slowly convey it, and have sufficient paper storage capacity, which is convenient for changing paper and order without stopping.
- ★This part is made by connecting the main beam with national standard 250 channel steel, 150H steel, 63 angle steel, etc., and the structure is reasonable. No jitter at high speed. The conveying and storage areas are covered with galvanized steel, with low friction, 3 sets of climbing ladders, and 1.2-inch safety guardrails on both sides. , High-strength herringbone pedal, to ensure the safety of personnel and easy operation.
- ★Both sides are equipped with safety barriers and security herringbone pedal operation plane is equipped with safety ladder, ensure staff safety and ease of operation.
- ★All roller surface after grinding hard chrome plating.
- ★Lifting part of independent frequency conversion drive. The high-strength jointless belt has no corrugation, and the upper layer is conveyed slowly and over a long distance, so it is not easy to break the paper.

C、Main dynamic parameters:

| Name | Power | Voltage | Frequency |
|------|-------|---------|-----------|
|------|-------|---------|-----------|

| | | | |
|---|------|------|------|
| Single-facer corrugated paper lifting motor | 4KW | 380V | 50HZ |
| Bridge adsorption fan | 3KW | 380V | 50HZ |
| Adjusting board wide motor | 250W | 380V | 50HZ |

D、Main parts brand and origin:

| Serial number | Main part name | Brand or place of origin | Remarks |
|---------------|---|------------------------------|---|
| 01 | The bridge main skeleton | Tiangang or tanggang | It is made of national standard 250 channel steel, 150H steel, 63 angle steel, etc. |
| 02 | Guardrail | Tiangang | Φ42mm Low pressure fluid pipe |
| 03 | Paper lifting belt | Shanghai | PVC conveyor belt |
| 04 | Cardboard conveyor belt | Hebei | Parallel transport rubber band |
| 05 | Frequency converter | Delta | |
| 06 | Bearing | NSK | |
| 07 | Seat belt bearing | FuJian | |
| 08 | Paper width adjustment reducer | Shangdong jinbuhuan reducer | |
| 09 | Paper motor (frequency) | Hebei hengshui | |
| 10 | Conveying roller and paper roller、over paper roller | Tiangang Seamless steel pipe | |
| 11 | Low-voltage electrical appliances | SIEMENS | Contactora, relay, button |

8、Bridge correction machine control system
A、Technical parameters:

- ★ Non-contact detection corrugated.
- ★ High precision correction paper.
- ★ It does not require any adjustment when the width of the paper changes.
- ★ Closed-loop control, continuous operation.
- ★ Full size infrared LED detection, long life.
- ★ At the same time the center and edges of the base correction.



- ★ Bridge tension control system to ensure that there is a single corrugated paper steady tension.
- ★ Tension control manually controlled by the regulator.
- ★ With auxiliary threading motor. In the new paper, when customer assistance.
- ★ With the paper through the switch. Joints over time cut the tension.



B、 Main parts brand and origin:

| Serial number | Name | Quantity | Model |
|---------------------------|--------------------------|----------|---------------|
| Correction machine | | | |
| 1 | Correction light curtain | 2 | FE4521 |
| 2 | face paper light curtain | 1 | FE4521 |
| 3 | Fitting module | 2 | ZC4081 |
| 4 | control motor | 2 | AG2591 |
| 5 | control panel | 2 | DC0341 |
| 6 | display | 1 | DO2000 |
| Tensioner | | | |
| 1 | PLC | 1 | FBS-24MAT2-AC |

| | | | |
|---|--------------------|---|-----------------|
| 2 | Proportional valve | 2 | DSMC I+V1050-31 |
| 3 | Brake system | 2 | |

9、GM-20 Double glue machine

A、Technical parameters:

| | |
|---------------------------------------|---------------|
| Working width | 2200mm |
| Design speed | 200m/min |
| Economic speed | 100--180m/min |
| Glue volume adjustment range | 0.08-0.6mm |
| Number of anilox roller | 32 lines |
| Preheating cylinder temperature range | 150—200℃ |
| Working power | 380V 50Hz 9KW |
| Air source system | 0.4—0.9Mpa |
| Pressing method | Pneumatic |



B、Structural feature:

★The double glue machine is a corrugated paper conveyed from the flyover. After preheating, it is coated again with glue and then pasted into the double-sided machine to paste and bond to produce three-layer five-layer cardboard.

★Frame cast iron structure, stable performance, upper middle layer preheater diameter 400mm, increase paper temperature to facilitate glue paste, double pressure roller design glue evenly, stainless steel glue groove, automatic circulation glue supply.

★after quenched of the glue roller surface,the hole machining, surface grinding and doing balancing engraved anilox pit type, coating evenly, less consumption of plastic.

★The transmission of the glue unit is directly connected by the frequency conversion motor through the reducer, and the frequency conversion control ensures that the linear speed of the glue roller is synchronized with the double-sided machine and can operate independently. Use angle sensor, PLC, touch screen man-machine interface display. According to different paper quality, different speeds automatically control the amount of glue, according to the different corrugated shape automatically adjust the gap between the pressure rollers, without accumulating errors.

C、Main component parameters:

| Part name | Craftsmanship | Specification | Surface treatment |
|---------------------|---------------|---------------|---|
| Glue roller | | ∅ 268mm | Round grinding and pressing pit mesh chrome plating |
| Fixed paste roller | | ∅ 146mm | Round grinding chrome |
| Pressure roller | | ∅ 150mm | Round grinding chrome |
| Paper shaft | | ∅ 110mm | Round grinding chrome |
| Preheating cylinder | | ∅ 400mm | Round grinding chrome |

D、Main dynamic parameters:

| Name | Power | Voltage | Frequency |
|-------------------------------|-------|---------|-----------|
| Rubber roller active motor | 3KW*2 | 380V | 50HZ |
| Glue adjustment speed reducer | 200W | 380V | 50HZ |
| Roller gap adjustment motor | 200W | 380V | 50HZ |

E、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|-----------------------------------|-----------------------------|---------------------------|
| 01 | Glue roller and paste roller | Tiangang | 45# steel |
| 02 | Preheat roller | Tiangang or Jigang | Q235B Container board |
| 03 | Bearing | NSK | |
| 04 | Bearing with seat | Fujian | |
| 05 | Pneumatic Components | AirTac | |
| 06 | Low-voltage electrical appliances | SIEMENS | Contacting, relay, button |
| 07 | Glue reducer | Taiwan city-state or Wanxin | |
| 08 | Main reducer | Taiwan city-state or Wanxin | |
| 09 | Touch screen | MCGS | 10.4 inch |
| 10 | PLC and inverter | Delta | |

| | | | |
|----|-------------|------------------|-------|
| 11 | Timing belt | Germany OPTIBELT | |
| 12 | Trap | BeiJing | Float |

10、SM-F Double facer

A、Technical parameters:

| | | |
|--------------------------|----------------|---|
| Working width | 2200mm |  |
| Design speed | 200m/min | |
| Economic speed | 120-200mmin | |
| Hot plate number | 600mm×16 piece | |
| Cooling section length | 4 meters | |
| Temperature requirements | 160—200℃ | |
| Steam pressure | 0.8-1.3Mpa | |
| Air pressure | 0.5—0.6Mpa | |
| Pneumatic pressure plate | 10 groups | |
| Working power | 380V 50Hz 55KW | |

B、Structural feature:

- ★The double-sided machine is a glued single-sided corrugated paper and facial paper laminated, heated platen heating, glue paste, stereotypes to produce flat cardboard.
- ★Surface of hot plate is dealt with grinding, hot plate width 600mm, in total 16 pieces hot plate, Minister cooling stereotypes 4m. Hot plate is made adopt container board, enclosed pressure container certificate and inspection certificate. Internal thermal panels for partition isolation structure, s-shaped flow of steam, Steam, water separation function apparent, improve the using rate of steam.
- ★The hot plate adopts pneumatic pressure plate structure. The pressure plate lifting adopts pneumatic structure. 10 sets of spring pneumatic pressure plates are standard.
- ★The heat pipe of the heating plate controls the temperature in multiple sections and has a temperature display.
- ★The upper cotton webbing is automatically centered by the correcting pneumatic valve, and the double cylinder is used to control the S-shaped cotton web tensioning device. The amount of tightening is large.
- ★The lower belt adopts pneumatic tensioning mechanism, the structure is simple and practical, the left and right of the lower conveyor belt is automatically corrected and aligned, and it can also be

adjusted manually on both sides.

- ★ Gearbox drive unit using an independent structure, gear steel ZG-500 number for materials, the use of oil-immersed gear lubrication.
- ★ Electrical components used internationally renowned brands, the device stable and reliable operation.
- ★ Main drive motor for the motor frequency energy, low-speed torque, wide speed range, reliable, easy maintenance.
- ★ The main backbone of high intensity profiles GB, solid structure, beautiful appearance, suitable for high speed working.

C、Main component parameters:

| Part name | Craftsmanship | Specification | Surface treatment |
|-----------------------------------|---------------|---------------|---|
| Upper drive rubber roller | | ∅ 700mm | Covered with wear-resistant rubber |
| Lower drive rubber roller | | ∅ 400mm | Covered with wear-resistant rubber |
| Front and rear driven belt roller | | ∅ 215mm | Round grinding chrome plating polishing |
| Top tension roller | | ∅ 155mm | Round grinding chrome plating polishing |
| Upper belt adjustment roller | | ∅ 155mm | Round grinding chrome plating polishing |

D、Main dynamic parameters:

| Name | Power | Voltage | Frequency |
|------------------|-------|---------|-----------|
| Main drive motor | 55KW | 380V | 50HZ |

E、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|--------------------|--|-------------------------------|
| 01 | Main skeleton | Tiangang or lai gang production profiles | NO.36channel and NO.18 I-beam |
| 02 | Drive wallboard | HeBei HanDan | Q345 |
| 03 | Heat board | Tiangang or Jigang | Q235B container board made |
| 04 | Main drive motor | HeBei HengShui | 55KW Frequency motor |
| 05 | Cotton webbing | ShenYang | Cotton webbing |

| | | | |
|----|-----------------------------------|----------------|---------------------------|
| | | | thickness:9mm |
| 06 | Trap | BeiJing | Float |
| 07 | Low-voltage electrical appliances | SIEMENS | Contactora, relay, button |
| 08 | Pneumatic Components | AirTac or sono | |
| 09 | Frequency converter | Delta | |
| 11 | Bearing | NSK | |
| 12 | Bearing with seat | FuJian | |

11、NCBD thin blade slitter scorer (Zero Pressure Line)

A、Technical parameters:

| | | |
|--|------------------|--|
| Working width | 2200mm |  |
| Design speed | 250m/min | |
| Economic speed | 200-230m/min | |
| Mechanical configuration | 7 Knife 12 lines | |
| Min cutting width | 140mm | |
| Minimum indentation distance | 0mm | |
| Cutter wheel positioning accuracy | ±0.5mm | |
| Horizontal movement of the whole machine | ±100mm | |

B、Structural feature:

- ★The synchronous servo motor controls the row of knives and wires. Automatic reset. Precise size. Change order time is 1- 3 seconds. The two machines can be used to change orders immediately without slowing down.
- ★ PLC control system, using CANopen bus system, with order management function, equipped with a synchronous signal input interface with dryer speed.
- ★HMI with 10.4-inch color touch screen, storage 999 orders, change orders automatically or manually for a single, fault alarm.
- ★Three kinds of pressure line forms: Convex against the concave (three layers line)、Convex against the concave (five layers line)、Convex against Flat, Three kinds of electric pressure line

- forms can be converted.Crimping round shades by computer control, linear, and easy to bend.
- ★Using thin tungsten alloy steel knife, sharp blade, long life of more than 8 million meters. knife sharpener for computer control, automatic or manual knife sharpener, Cutting edge sharpening can be divided,improve productivity Efficiency.
 - ★Imported synchronous belt transmission is adopted, and the thin blade holder and the crimping seat are supported by linear bearings, and the positioning size is accurate without accumulating errors.
 - ★The cutting and crimping are driven by independent frequency conversion motors. The suction port is automatically positioned with the change order.
 - ★With gas storage tank and low pressure protection function.

C、Main dynamic parameters:

| Name | Power | Voltage | Frequency |
|---|--------|---------|-----------|
| Row of single-pole servo motors | 0.45KW | 380V | 50HZ |
| Slitting inverter motor | 7.5KW | 380V | 50HZ |
| Pressure line frequency conversion motor | 7.5KW | 380V | 50HZ |
| Suction outlet frequency conversion motor | 0.55KW | 380v | 50HZ |


D、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|--|---------------------------|--------------------|
| 01 | Frame | ShanDong JiNan | Q345 |
| 02 | Rail beam | TianJin | Q345 |
| 03 | PLC Programming controller | Schneider | CANopen Bus system |
| 04 | HMI | Kinco | 10.4 inch |
| 05 | Row knife servo control | Kinco | 500w |
| 06 | Row line servo control | Kinco | 500w |
| 07 | Line change control | Kinco | 500w |
| 08 | Suction control | Kinco | 500w |
| 09 | Proximity switch, photoelectric switch | Japan omron | |
| 10 | Relay | Schneider | |

| | | | |
|----|---------------------------------|--------------------------|----------|
| 11 | Main frequency conversion motor | HeBei | 5.5KW×2 |
| 12 | Horizontal motor | Shandong Jinzhan Reducer | |
| 13 | Suction exhaust motor | ZheJiang | 0.55kw |
| 14 | Solenoid valve, cylinder | AirTac | |
| 15 | Bearing | HRB or NSK | |
| 16 | Bearing with seat | ZheJiang Wuhuan | |
| 17 | Tungsten alloy blade | Sichuan Boyan | ∅ 260mm |
| 18 | Linear Guides | TaiWan | ShangYin |

12、NC-20 Double layer NC cutter

A、Technical parameters:

| | | |
|---------------------|--------------------|---|
| Working width | 2200mm |  |
| Design speed | 200m/min | |
| Economic speed | 130-180m/min | |
| Min. cutting length | 500mm | |
| Max. cutting length | 9999mm | |
| Cutting accuracy | 匀速为±1mm, | |
| Working power | 380V 50Hz 106KW | |

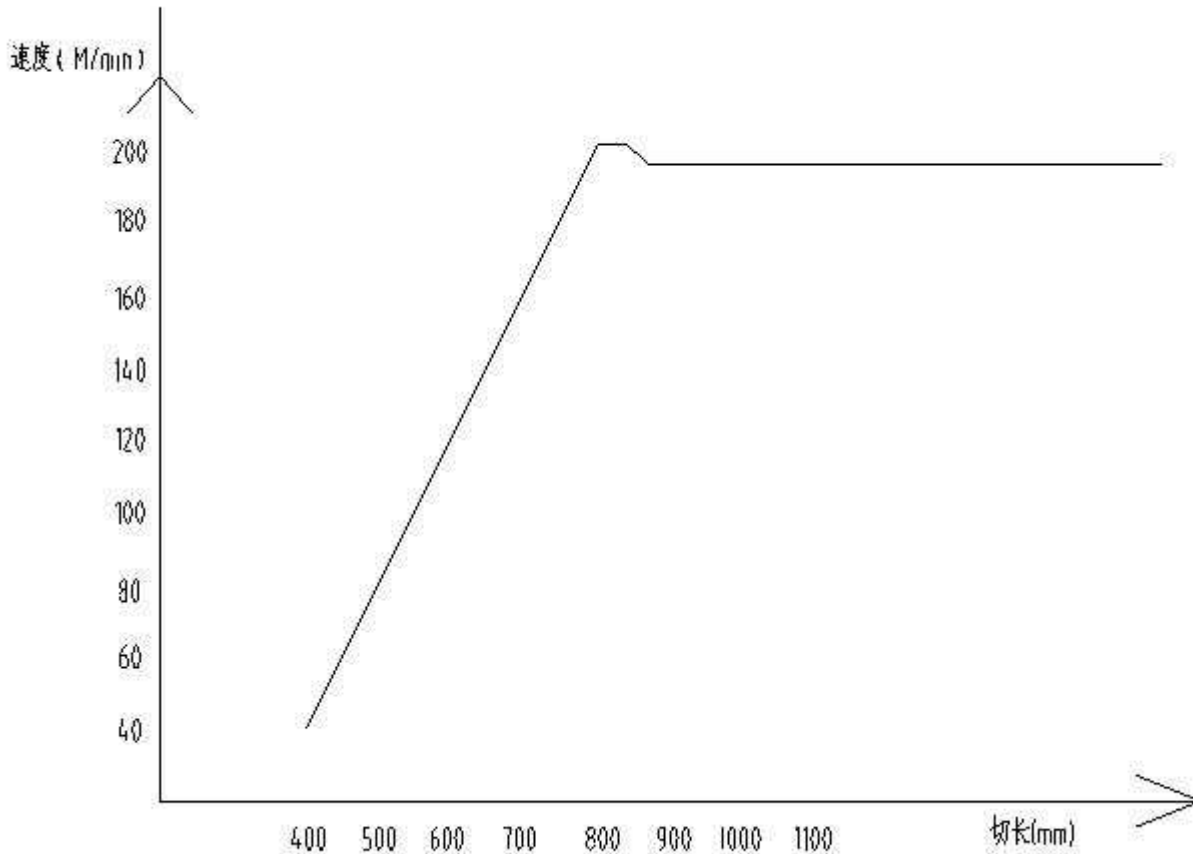
B、Structural feature:

- ★It can store 200 units orders, replace the cutter specifications quickly and accurately, changing orders without stop, And enables networked computers to facilitate production management.
- ★Knife shaft drive gears are precision forged steel induction hardening, backlash-free transmission, advanced keyless connection, high transmission accuracy.
- ★Cutting machine adopts inlaid front steel blade knife spiral structure, serrated knife. scissors, shears, shear force, long blade life.
- ★Around feed rollers are used the sun gear platen way, smooth delivery, pressure evenly, easy to crush plate board or cause blockage.
- ★This type of brake is energy storage type (non-energy brake), so in the process of production, the

average power consumption is 1 / 3 of that of the ordinary NC cutting machine, saving more than 70% of electricity and achieving the goal of saving money.

- ★Exact and adjustable no gap gear to ensure precise blade engagement, running balance.
- ★Independent oil pump and filter are used to distribute two sets of copper pipes in each gear position to feed oil, lubricate and cool.
- ★Knife roller: fine quality forged steel material, the balanced, with good stability.

● 车速极速表:



C、Main dynamic parameters:

| Craftsmanship Part name | Specification | Surface treatment | Special treatment |
|--|---------------|---|-------------------|
| Cross cutting the upper and lower knife axis | ∅ 215mm | Conditioning | Dynamic balance |
| Front lower conveying roller | ∅ 155mm | Round grinding chrome plating polishing | Dynamic balance |
| Rear lower conveyor roller | ∅ 155mm | Round grinding chrome plating polishing | Dynamic balance |
| Paper shaft | ∅ 165mm | Packed with silicone | Dynamic balance |
| Output sun gear | ∅ 160mm | Polyurethane | Intensive |

D、Main dynamic parameters:

| Name | Power | Voltage | Frequency |
|------------------------|------------------------------------|---------|-----------|
| Main drive servo motor | 42.9KW | 380V | 50HZ |
| Front feed motor | 2.2KW (Frequency adjustment speed) | 380V | 50HZ |
| Rear feed motor | 2.2KW (Frequency adjustment speed) | 380V | 50HZ |

E、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|-----------------------------------|----------------------------|------------------------|
| 01 | Box rack | Self-produced | HT250 |
| 02 | Knife roll | Tiangang Precision Forging | 42CrMo |
| 03 | Full AC servo motor | PHASE,ITALY | 42.9KW |
| 04 | Paper frequency conversion motor | HeBei YongShun | |
| 05 | Flying shear servo control system | INVT | |
| 06 | Rotary encoder | Germany SIKI | |
| 07 | Timing belt | Obi, Germany OPTIBELT | |
| 08 | Tightening sleeve | XianYang ChaoYue | |
| 09 | Bearing with seat | FuJian | |
| 10 | Low-voltage electrical appliances | SIEMENS | Contact, relay, button |
| 11 | Proximity switch | Omron Japan OMRON | |
| 12 | Frequency converter | Delta | |
| 13 | HMI | MCGS | |
| 14 | Sun gear | ShenZhen | |

13、DM-LM Automatic large gantry stacker
A、Technical parameters:

| | | |
|-------------------------|----------------|--|
| Working width | 2200mm |  |
| Design speed | 250m/min | |
| Economic speed | 150-250m/min | |
| Maximum stacking length | 3500mm | |
| Maximum stacking height | 1700mm | |
| Working power | 380V 50Hz 17KW | |

B、Main performance characteristics:

- ★Gantry stacking.Change order time 20 seconds,automatic counting.
- ★Synchronized with the production management system,orders management,Centralized management,Do not slow down automatically for a single.
- ★Production management for a single waste is less than 700mm.
- ★The crawler stacking platform, AC servo control lifting, stacking stable、tidy.
- ★Backsplash can automatic shift, stacking for small orders;
- ★Independent sealed control cabinets, electrical equipment operating under clean environment;
- ★Color touch-screen display for easy on-site operation.
- ★Fully automatic operation control, improve efficiency and save manpower, reduce labor intensity.

C、Main dynamic parameters:

| Name | Power | Voltage | Frequency |
|---------------------------|--------|---------|-----------|
| Main conveying motor | 3KW*3 | 380V | 50HZ |
| Suction motor | 3KW | 380V | 50HZ |
| Horizontal conveyor motor | 3KW | 380V | 50HZ |
| Tailgate motor | 0.75KW | 380V | 50HZ |


D、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|---------------------|---------------------------|---------------------------------|
| 01 | Frame | Tiangang | Main frame No. 16 channel steel |
| 02 | PU Leather belt | ShangHai | |
| 03 | Frequency converter | Taiwan Delta | 3.7KW |

| | | | |
|----|----------------------|------------|--|
| 04 | Horizontal reducer | ShanDong | |
| 05 | Proximity switch | OMRON | |
| 06 | PLC | Delta | |
| 07 | HMI | MCGS | |
| 08 | Rotary encoder | Wuxi Ruipu | |
| 09 | Contactora | Schneider | |
| 10 | Pneumatic Components | AirTAC | |

DM-LM Automatic small gantry stacking machine

A、技术参数:

| | | |
|-------------------------|----------------|---|
| Working width | 2200mm |  |
| Design speed | 200m/min | |
| Economic speed | 130-200m/min | |
| Maximum stacking length | 3500mm | |
| Maximum stacking height | 250mm | |
| Working power | 380V 50Hz 17KW | |

B、Main performance characteristics:

- ★ Servo-driven platform lifts, four-stage variable-frequency conveying, automatic point stacking discharge, imported high-strength belt output, and a standard conveyor frame on the paper side.
- ★ Gantry stacking Changing single time is 5seconds, automatic counting, automatic cross out automatically for a single.
- ★ Synchronized with the production management system, order management, Centralized management, do not slow down automatically for a single.
- ★ Production management for a single waste less than 700mm.
- ★ Crawler stacking platform, AC servo control movements, Stacking smooth, neat.
- ★ When stacking reaches a set number of automatic frequency control smooth laterally out of paper.
- ★ Tailgate AC servo control positioning for a single automatic, rapid, precise adjustment.
- ★ Tailgate automatically shift for small orders stacking.
- ★ Delivery side of the standard electric transport planes, and duplex trolley.
- ★ Independent sealed control cabinets, electrical equipment operating under clean environment.
- ★ Color touch-screen display for easy on-site operation.
- ★ Fully automatic operation control, improve efficiency and save manpower, reduce labor intensity.

D、Main dynamic parameters:


| Name | Power | Voltage | Frequency |
|-------------------------|--------|---------|-----------|
| Main conveying motor | 2.2KW | 380V | 50HZ |
| Suction motor | 3KW | 380V | 50HZ |
| Lateral conveying motor | 1.53KW | 380V | 50HZ |
| Tailgate motor | 1.1KW | 380V | 50HZ |
| Gantry lift motor | 3.7KW | 380V | 50HZ |

D、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|----------------------|---------------------------|---------------------------------|
| 01 | Frame | Tiangang | Main frame No. 16 channel steel |
| 02 | PU Leather belt | ShangHai | |
| 03 | Frequency converter | Taiwan Delta | 3.7KW |
| 04 | Horizontal reducer | ShanDong | |
| 05 | Proximity switch | OMRON | |
| 06 | PLC | Delta | |
| 07 | HMI | KunLunTongTai | |
| 08 | Rotary encoder | Wuxi Ruipu | |
| 09 | Contactora | Schneider | |
| 10 | Pneumatic Components | AirTAC | |

14、Glue station system

A、Technical parameters:

| | | |
|------------------------------------|-------------------|--|
| Water source pressure | 5-6kgf/m2 |  |
| Compressed air pressure | 4-7 kgf/m2。 | |
| Maximum compressed air consumption | 105m3/h | |
| Viscosity | Change within ±2s | |
| Pasting temperature | Change within ±1℃ | |

| | | |
|---------------------------|----------------|--|
| Time to make glue | 30min | |
| Maximum production volume | 1650kg | |
| Minimum production volume | 750kg | |
| Working power | 380V 50Hz 32KW | |

B、Main performance characteristics:

- ★The system does not need to use stabilizer when making paste, and the paste liquid has strong penetrating power and the paste liquid is stable.
- ★The operation of the entire system is controlled by the setting of the program, and the software of the control system is designed and developed by the company according to the actual needs of each carton factory, and the operation is stable and reliable.
- ★The addition of all materials is set by the program and controlled by the PLC, and the measurement is accurate.
- ★The system is equipped with a temperature sensor and a temperature display to control the glue temperature to ensure that starch molecules are more soluble in water, and at the same time to prevent the quality of the glue from being affected by the ambient temperature and causing large changes.
- ★This equipment is equipped with an automatic tank washing program. After the glue is delivered, the tank body is automatically cleaned.
- ★The liquid level sensor of each glue point storage tank is used to monitor the liquid level. When the liquid level is low, the PLC automatically selects the formula and prepares the paste according to different glue points.
- ★The cutting and stirring time are controlled by PLC through program setting.
- ★After alkalizing into liquid alkali, the tablets are stored in the alkali storage tank; the level of the alkali transfer tank is controlled by PLC. When the set low limit is reached, it is automatically refilled from the alkali storage tank through the pump.
- ★When the material level of the starch storage tank drops to the material level sensor, the system automatically alarms to prompt the addition of materials and vibrates the addition of materials.
- ★The glue feeding is automatically sent to the glue storage tank through the pneumatic diaphragm pump, which is controlled by the PLC.

15、Steam system

A、Technical parameters:

| | | |
|---|-------------------------------------|--------------|
| 1 | Steam consumption | About 1.2T/h |
| 2 | Equipped with heat source | 2t/h |
| 3 | Steam pressure | 1.25Mpa |
| 4 | Maximum temperature in the pipeline | 170—200℃ |

B、Maximum temperature in the pipeline:

- ★It supplies heating energy for the thermal equipment of the production line to keep the working temperature stable.
- ★Each unit is designed as an independent small unit steam supply system, saving energy and easy adjustment.
- ★Each group of hydrophobic units is equipped with an empty bypass, which cools the equipment quickly when the production is stopped.
- ★Floating ball trap, with emptying device, stainless steel check valve, to prevent leakage.
- ★The metal hose is used for flexible connection between the piping system and the rotating heating components, so as to prolong the service life of the rotating joint.
- ★All steam pipes in the machine are made of seamless steel pipes to ensure the safety of use under normal pressure.



C、Main parts brand and origin:

| Serial number | Name of main parts | Brands or place of origin | Remarks |
|---------------|--------------------------|---------------------------|---------|
| 01 | Rotary joint, metal hose | Quanzhou Yujie | |
| 02 | Trap | BeiJing | Float |
| 03 | Globe valve, ball valve | YuanDa China | |
| 04 | Check valve | Zhengzhou Yuming | |
| 05 | | | |

16、Production management system

一、Production management system configuration

1、Cross-cutting machine configuration

| | Configuration and specification | QTY | NOTE |
|--------------|--|-----|------|
| Work station | operation station | 1 | |
| | High performance cooling fans | 2 | |
| | Alarm chy-tech | 1 | |
| | button(APT brand/Siemens and ergong joint venture) | 6 | |
| computer | Intel Celeron M CPU | 1 | |
| | Kingston 1Gmemory | 1 | |
| | Taiwan original embedded industrial motherboard(Integrated graphics CARDS, | 1 | |

| | | | |
|--------------------|--|---|--|
| | network CARDS) | | |
| | Taiwan original industrial chassis | 1 | |
| | Industrial-grade hard disk(7 X 24hours work) | 1 | |
| | Philips 19 inch LCD monitor | 1 | |
| | MICROSETP The keyboard/mouse | 1 | |
| | Uninterruptible power supply (APC, USA) | 1 | Provide a stable power supply |
| | D_link network switch | 1 | |
| | Windows Server 2003operation system | 1 | |
| Main control board | Germany's Siemens PLC | 1 | Core computing components, stable and durable high precision |
| | Germany's Siemens PLC extension module | 2 | Used for data communication with crosscutting systems |
| | Switching power supply (Taiwan Meanwell) | 1 | |
| | Double air switch (chint) | 1 | |
| | Kang DE converter | 1 | |
| | Group relay omron (Japan) | 2 | |
| | Isolation transformer | 1 | |
| The sensor type | Proximity switch omron (Japan) | 2 | |
| | Magic eye (Japan OPTEx) | 1 | Cross-cutting knife cut paper detection |

1、Gluing machine, paste machine) configuration

| | Configuration and specification | QTY | NOTE |
|--------------|---|------|---|
| Work station | Work station | 1 | |
| | High performance cooling fans | 2 | |
| | Alarm chy-tech | 1 | |
| | button(APT brand/Siemens and ergong joint venture) | 4 | |
| | speed 、 resting change paper meters display board70X130CM | 1 | 8 inches large digital display, can clearly show the speed, change the paper a few meters |
| computer | Intel Celeron M CPU | 1 | |
| | Kingston 1Gmemory | 1 | |
| | Taiwan original embedded industrial motherboard(Integrated graphics CARDS, network CARDS) | 1 | |
| | Taiwan original industrial chassis | 1 | |
| | Solid state electronic hard drive(7 X 24hour work) | 1 | |
| | Philips 19 inch LCD monitor | 1 | |
| | Samsung keyboard | 1 | |
| | Windows Embedded operation system | 1set | |

| | | | |
|--------------------|--|---|--|
| Main control board | Germany's Siemens PLC | 1 | Core computing components, stable and durable high precision |
| | Switching power supply (Taiwan Meanwell) | 1 | |
| | Double air switch (chint) | 1 | |
| | Kang DE converter | 1 | |
| | Relay Group (Omron) | 2 | |
| Sensor category | Proximity switch omron (Japan) | 1 | |

3、Single facer configuration(B, C, E each machine has the following configuration of 3 sets)

| | Configuration and specification | QTY | NOTE |
|--------------------|--|-----|--|
| Work station | Work station | 1 | |
| | High performance cooling fans | 2 | |
| | Alarm chy-tech | 1 | |
| | button(APT brand/Siemens and ergong joint venture) | 8 | |
| computer | Intel Celeron M CPU | 1 | |
| | Kingston 1Gmemory | 1 | |
| | Taiwan original embedded industrial motherboard (integrated graphics CARDS, network CARDS) | 1 | |
| | Taiwan original industrial chassis | 1 | |
| | Solid state electronic hard drive (7 X 24 hours) | 1 | |
| | Philips 19 inch LCD monitor | 1 | |
| | Samsung keyboard | 1 | |
| | Windows Embedded operation system | 1 | |
| Main control board | Germany's SiemensPLC | 1 | Core computing components, stable and durable high precision |
| | Switching power supply (Taiwan meanwell) | 1 | |
| | Double air switch (chint) | 1 | |
| | Kang DE converter | 1 | |
| | Relay group (Japan omron)) | 3 | |
| The sensor type | Proximity switch omron (Japan) | 2 | |
| | Magic eye (Taiwan yangming) | 2 | |
| | Magic eye panasonic (Japan) | 1 | |
| | Inkjet device | 1 | |

4、Other configuration

| Configuration and specification | QTY | NOTE |
|---------------------------------|-----|------|
| Tianzheng Voltage regulator | 1 | |
| Network line | 1 | |
| 3 core line | 1 | |

| | | |
|-------------|---|--|
| 5 core line | 1 | |
|-------------|---|--|

二、Production management system function

1、cutter machine function

| NO. | function | instruction |
|-----|--|---|
| 1 | The order entry, modify, delete | |
| 2 | Order management combination lock | Lock orders, prevent workshop personnel changes orders |
| 2 | Production line for real-time condition monitoring | Display speed, production performance, and orders |
| 3 | The production situation | Display the total length. Square. Poor rate. average Speed.produce time.stop time.Downtime. Did not produce the number of sheets. Did not produce a few meters and so on of that day on duty. |
| 4 | production situation shows that | Display the total length. Square. Poor rate. Average speed. Produce time. Stop time. Downtime. Did not produce the number of sheets. Did not produce a few meters and so on of this order. |
| 5 | Order to browse | Browsing can be produced in advance orders |
| 6 | Good plus, subtraction | For Good addend, subtrahend |
| 7 | Defective products plus, subtraction | For poor addend, subtrahend |
| 8 | Good, bad for the count | Good or bad record number set number of items |
| 9 | Advance XX Zhang Completion alarm | You can set the alarm before the order is completed XX meters, prompting the operator to prepare in advance for a single preparation |
| 10 | With cutter computer connect line | Party A required to provide the communication interface |
| 11 | With slitter connect line | Party A required to provide the communication interface |
| 12 | With stacking connect line | Party A required to provide the communication interface |
| 13 | With cutting machine connect line | Party A required to provide the communication interface |
| 14 | Automatic . Manual for a single | When an order can be completed production set whether to write automated production orders |
| 15 | Team setting | Team conducted between team setting shifts |

| | | |
|----|-------------------------------------|---|
| 16 | Pause for a single | When completed this order does not automatically replace write orders |
| 17 | Force for a single | The production order is not completed, write orders for the production of artificial force |
| 18 | Front pen | Specify reproduction has produced the order specifications |
| 19 | Buckle stock | With inventory number should be deducted the amount of production |
| 20 | Check a single | In the workshop has produced orders inquiry |
| 21 | Print labels | Online Print Production label (required customers to configure the computer to print) |
| 22 | Unfinished orders in meters summary | Orders can significantly wide number of queries have not produced a summary of the total rice |
| 23 | Hot plate speed control | Before and after the produce management automatic control hot platen speed |

2、Gluing machine (paste machine) function

| NO. | function | instruction |
|-----|---|---|
| 1 | Production line Immediate case monitoring | Display speed, production performance, and orders |
| 2 | The production situation | Display the total length. Square. Poor rate. average Speed.produce time.stop time.Downtime. Did not produce the number of sheets. Did not produce a few meters and so on of that day on duty. |
| 3 | production situation shows that | Display the total length. Square. Poor rate. Average speed. Produce time. Stop time. Downtime. Did not produce the number of sheets. Did not produce a few meters and so on of this order. |
| 4 | Order to browse | Browsing can be produced in advance orders |
| 6 | Change paper remaining length tips | Immediate online display paste the car to change paper length |
| 7 | Production preparation display | The display will be produced later in the order situation for Paper |
| 8 | Available online and automatic splicer | |
| 9 | Speed control | Depending on the performance of cross-system, set a maximum speed of different lengths of cardboard |
| 10 | XX meters before changing paper Alert | You can set the alarm before the order is completed XX meters, prompting the operator to make change paper prepared in advance |
| 11 | Next flute tips | Tip flute next production |
| 12 | Automatic speed control | When change paper, automatic control double facer speed、automatic control double facer speed according to flyover |

| | | |
|--|--|-------------------------|
| | | stacking paper quantity |
|--|--|-------------------------|

3、single facer function (B、 C、 E each machine has the following features)

| NO. | function | instruction |
|-----|--|---|
| 1 | Production line immediately situation Monitoring | Display speed, production performance, and orders |
| 2 | The production situation | Display the total length. Square. Poor rate. average Speed.produce time.stop time.Downtime. Did not produce the number of sheets. Did not produce a few meters and so on of that day on duty. |
| 3 | production situation shows that | Display the total length. Square. Poor rate. Average speed. Produce time. Stop time. Downtime. Did not produce the number of sheets. Did not produce a few meters and so on of this order. |
| 4 | Orders Browse | Browsing can be produced in advance orders |
| 6 | Change paper remaining length tips | Immediate online display paste the car to change paper length |
| 7 | Production preparation display | The display will be produced later in the order situation for Paper |
| 8 | Connect with automatic splicer | |
| 9 | XX meters before changing paper Alert | You can set the alarm before the order is completed XX meters, prompting the operator to make change paper prepared in advance |
| 10 | Flyover paper product calculation | Automatic calculation of the length of the bridge stacker, precision control within 2 meters |
| 11 | Automatic correction | Can be set to change paper xxx meters before the system automatically corrected once to ensure the accuracy of the calculation of the amount of paper piled overpass |
| 12 | Speed synchronous | Produce management automatic, you can set the machine speed and the duplex synchronous machine speed |
| 13 | Flyover stacking quantity control | In the case of synchronous speed can be set flyover pile of paper kept within a reasonable range |
| 14 | Change paper deceleration | When you want to replace the paper, the system immediately to reduce speed to facilitate the exchange of paper |
| 15 | Automatic speed control | Automatic double facer machine speed control when changing paper, according to the amount of the automatic control of the bridge stacker single machine speed |

4Office functions

| NO. | function | instruction |
|-----|------------------|---|
| 1 | Order scheduling | In the office of the production line for production orders arrangements |

| | | |
|----|---|--|
| 2 | Production line immediately situation monitoring | Each office computer can monitor the speed, production performance, production schedule orders, etc. |
| 3 | Estimated completion time of orders | Automatic estimate completion time for each order |
| 4 | Pit machine production reports | Print each order completed cases (yield, number of defective products, completion time, etc.) |
| 5 | Pit machine production efficiency analysis | Analysis of the production line loss, average speed, production time, downtime, etc. |
| 6 | Monthly statistical reports of paperboard production | Monthly analysis of daily production line output, boot time, down time, average speed, etc. |
| 7 | Completion of automatic data collection (accurate, detailed records of the production of good quality and bad products) | |
| 8 | Forklift preparation single | |
| 9 | Order Tracking | |
| 10 | ERP System interface connections | |

Note: The pictures provided in this document are for reference only. Party B reserves the right to change the appearance without changing the technical performance.