

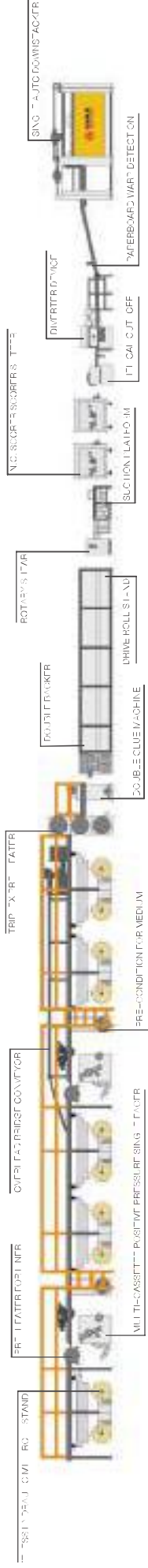
## **HSIEH HSU** AUTOMATIC CORRUGATOR LINE

**Width:2500**

**Design speed:300m/min**

**Type:Positive Pressure**

| S.N | Description  | Model     | Qty.          |
|-----|--|-----------|---------------|
| 1   | Motorized Roll Stand                               | HSIEH HSU | 5 sets        |
| 1-1 | Multi point brake                                  | HSIEH HSU | 20 sets       |
| 2   | Pre-heater(with wrapping arm)                      | HSIEH HSU | 4 sets        |
| 3   | Positive cassette single facer(30Q)                | HSIEH HSU | 2 sets        |
| 3-1 | Corrugator roll( with one cassette base)           | HSIEH HSU | 1 pair        |
| 3-2 | Corrugator roll( with one cassette base)           | HSIEH HSU | 1 pair        |
| 3-3 | Corrugator roll( with one cassette base)           | HSIEH HSU | 1 pair        |
| 3-4 | Electircal Shuttle                                 | HSIEH HSU | 3 sets        |
| 4   | Triple pre-heater                                  | HSIEH HSU | 1 set         |
| 5   | Double layer bridge-type transfer rack             | HSIEH HSU | 1 full inline |
| 6   | 5-ply glue machine                                 | HSIEH HSU | 1 full inline |
| 7   | Web-control system                                 | HSIEH HSU | 1 full inline |
| 8   | 20 hot plates wiht 3-sectioned temperature control | HSIEH HSU | 1 full inline |
| 9   | Corrugator cotton belt(up and down)                | HSIEH HSU | 1 pair        |
| 10  | Driving system                                     | HSIEH HSU | 1 set         |
| 11  | Scrap suction blower                               | HSIEH HSU | 1 set         |
| 12  | Slitter scroer                                     | HSIEH HSU | 2 sets        |
| 13  | Paperboard transfer equipment                      | HSIEH HSU | 1 set         |
| 14  | Scrap cutter                                       | HSIEH HSU | 1 set         |
| 15  | Rotary Shear                                       | HSIEH HSU | 1 set         |
| 16  | Com Auto counter stacker                           | HSIEH HSU | 1 set         |
| 17  | Splicer( 4 Ming Jia ,1 Feng Yuan)                  | HSIEH HSU | 5 sets        |
| 18  | Hydraulic guide rail cart                          | HSIEH HSU | 10 pics       |
| 19  | Intelligent temperature control                    | HSIEH HSU | 1 set         |
| 20  | Flute speed-up equipment                           | HSIEH HSU | 1 set         |
| 21  | Production system                                  | HSIEH HSU | 1 set         |
| 22  | Control Center                                     | HSIEH HSU | 1 set         |
| 23  | Power cables                                       |           | 1 set         |



#### Enhance Business Advantages

- Less experience dependency reduces labor costs
- Built-in Expert technology ensures cost reduction
- Intelligent cruise control maximizes the benefits of equipment
- Real-time visual reports improve management efficiency

#### Adaptive Cruise Control

- AI in charge instead of human operation
- Expert process proceed excellence
- All process control in synchronous linkage
- Automatically adjust the speed
- Fully utilizes the equipment.

#### High Speed & Energy Saving

- Professional Thermal management
- High efficiency & energy saving
- Quick gelatinization to avoid overheating
- Efficient thermal compensation to ensure efficiency

#### Built-in Expert Technology

- All processes in closed loop for standardized control
- Always matching the best process preset during production
- Formulas matching paper parameters, intelligent adaptation cruise
- Formula can be optimized for single order or bulk orders

#### Distant Mobile Control

- Production status displayed on mobile device
- Remotely controlled, supervisor location in
- Set hierarchical permissions, remote login
- Engineer fix and repair problems remotely
- Technology experts distant assist and service

## laptSync®350

Use human dependence, Guarantee cardboard quality, High efficiency and Energy saving

Hsieh Hsu DID IT!

Built-in expert technology that completely gets rid of the influence of lacking experience or passive personnel. Create competitive advantages through "Intelligent Production" and maximizes the value of equipment investment.

#### Big Data's Analysis

- Process formula recorded each 5 secs
- The interval can be flexibly set
- Export reports for analysis of abnormal
- Refining the best process parameters
- Help continuously optimize performance
- Analyzing quality fault in scientific way

#### Online Anti-warp Leveling

- Flatness online detection
- ACC auto process adjustment
- Improve delaying adjustment
- Adopt standard operation
- Real-time warp analysis
- Automatic visualization on reports

#### Visualized Report

- Cardboard anti-warp analysis
- Machine halt Analysis
- Order output analysis
- Trimming Statistical/ Analysis
- Defective product quantity analysis

**- Cassette Single Facer MSF-35PA/MSF-40P**  
**high speed single facer: performance & intelligence**



SPEED 350M/min. ~ 400M/min.

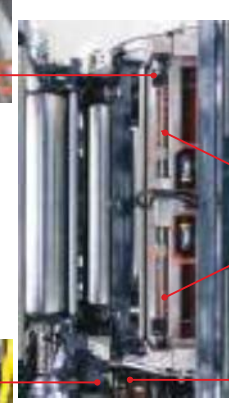


• sensitive pressure type with fingerless  
 a roll and main drive all using servo motor  
 I adjust by pneumatic system  
 ing to different kinds of materials, paper and production  
 > set glue gap  
 ator adjust glue amount  
 Automatically retreat and stop When medium paper is broken

- main drive servo motor
- pressure roll servo motor



- gluing drive by servo motor
- glue gap by servo electrical micro-adjust



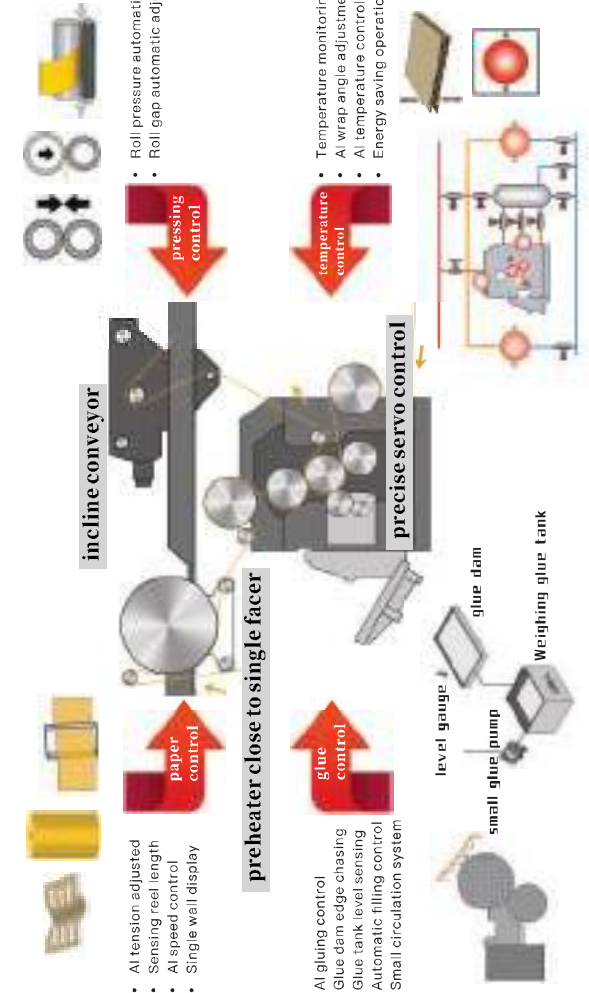
isolate plate adjust using servo motor

glue roll drive using servo motor



- cassette type quick change roll
- can pre-heating to save standby time

**Single Facer AI Technology**  
 Temperature , gluing , paper tension are all controlled by intelligent system.operating speed up/down without manual operation, efficiency will not be affected by inert



**ess Mill Roll Stand MRS-V4/MRS-VS**

**Preheater For Liner / Preconditioner For The Medium / Triplex Preheater**



| Paper width |               | Max. Paper diameter |
|-------------|---------------|---------------------|
| MRS-V4      | 1600mm-2000mm | 1500mm              |
| MRS-V5      | 2000mm-2800mm | 1600mm              |

- Clamping of open-lose and right-left adjust byhydraulic
- Both side have operation button for easy operation
- Main shaft and rail add ruler can precise movement



Tension control:  
Pneumatic braker



Tooth chuck



GREEN LINER DEVILE

Intelligent sensing paper remaining length

Optional:

- Imported multi-point brake
- Green liner device
- Rest paper push down
- Electric track with guide pushing down

**PAPER PREHEATER**

- Diameter: 600、800、1000、1200mm
- Max. Paper width: 2800mm
- Max. wrap angle: 240°
- Temperature: 170℃

- Using new type preheater hang upside on bridge
- Saving space that effective use of factory space
- Option for auto wrap angle function

**MEDIUM PREHEATER**

- Diameter: 600、800、1000、1200mm
- Max. Paper width: 2800mm
- Max. wrap angle: 240°
- Temperature: 170℃

- Diameter 135 double guide wheel empty shaft type
- Option for auto wrap angle function

**TRIPLEX PREHEATER**

- Diameter: 600mm-1200mm
- Machine width: 1800-2800mm
- Max. wrap angle: 240°
- Temperature: 170℃

- Rotary preheater can keep idling at a constant speed
- 6 pcs guide roll act auto wrap angle instruction

## Intelligent Bridge Conveyor BC-04

**Double Gluing Maching GU-D8**  
The precision of the equipment reflects the extraordinary value of Hsieh HSU  
Glue gap/ Auto glue dam are adjusted with adaptive cruise under synchronous servo control



- Double overhead bridge conveyor with main frame made of "300" I-beam
- Incline conveyor and bridge conveyor using asynchronous servo motor, improve overall efficiency
- Using pneumatic closure diverter. Incline conveyor and bridge conveyor using independent drive
- Both sides of bridge with safety catwalks and 3 sets of stairs, optional for bridge Corraliger and tension control
- Running more stable, improve bridge conveyor paper stack amount
- Using new type incline conveyor, pile paper more neatly
- Paper running on bridge and incline conveyor drive independently by servo control, guaranteed to run at high speed stack paper neat, reach perfect forming
- Incline conveyor 2 sets, guide separately forming paper from single facer to triplex preheater



### Configuration and Performance



- Two press roll up/down by pneumatic control
- Glue roll / Doctor roll gap adjusted with speed
- Glue gap automatic adjust by synchronous servo motor with digital display
- Professional structural design facilitates the replacement of glue roll and doctor roll
- Glue/ Recycle tank separated for easy cleaning
- Glue dam intelligent edge chasing, save the labor

### Fluted-tip Heater

Patented heat injection device  
(less vapor water) ensuring pressure resistance and avoiding cardboard creases

### Heating key points, speed up, cardboard stiff



Regulate heating with speed  
Adjust moisture to prevent cracked

### Intelligent Spray Control

Adjust paper moisture,  
Leveling paperboard cross-bend

- Quickly control the water balance
- 3-stage spray volume selection
- Auto adjust spray volume with speed
- Spray is individually controlled /adjustable
- Touch screen, easily switch to manual



**the Backer DF-12-18/20/22**

ation of advanced technology and equipment performance, it performance through high speed, ensure quality and capacity, cost competitive strength

**N.C. Scorer Slitter (Bottom Type)**  
**RRLB-4SH/5SH/6SH/7SH**



**Cardboard Molding**

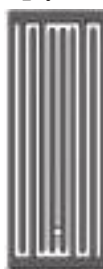


- Configuration:**
- drive roll: diameter 850 mm
  - drive roll: diameter 646 mm
  - lower drive roll wrap with non-slip belt
  - upper/lower drive roll is detachable for maintenance
  - drive motor: upper 125HP /lower 75HP

- Benefits:**
- Arc preheater
  - Thin type spray heater
  - Auto alignment device
  - Clean device



**Thin-type Heater**

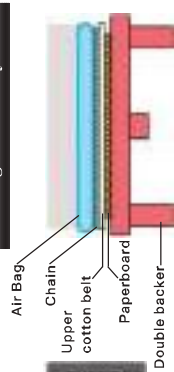


Patented channel design, better energy saving effect

- Configuration:**
- Quick temperature response
  - 30% steam less than old type
  - Fast thermal compensation
  - Less paste residue
  - Not easy to distort

- Benefits:**
- Save energy cost
  - Suitable for complex material combination
  - Assure the efficiency of high GSM
  - Optional spray heater for 4/6 ply

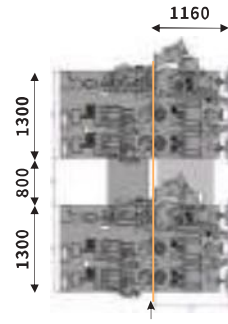
**Intelligent Press system**



- Configuration:**
- Pneumatic adjustment, intelligent lifting pressure
  - Control press pressure by adjusting air pressure in bag
  - PLC control inverter accurately control the pressure
  - Prevent cardboard pit caused by improper pressure

- Benefits:**
- Improve paperboard physical strength
  - Hot plate press control sensitively
  - Good bonding effect of cardboard

**Mechanical Configuration**



- Minimum slitting distance: 150mm
- Blade diameter: 270mm
- Accuracy: ±1mm
- Minimum scorer distance: 0mm (two set scoring tool coordination)
- Slitting capacity: 4 OUT (5 sets slitting and 8 sets scoring)
- 5 OUT (6 sets slitting and 10 sets scoring)
- 6 OUT (7 sets slitting and 12 sets scoring)
- 7 OUT (8 sets slitting and 14 sets scoring)

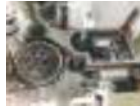
- Slitting and Scoring controlled by independent motor
- Bottom blade has independent grinding device
- Match waste dust suction device
- Slitting pad with independent transmission design
- Match waste trimming pressed device
- Save the space for working environment
- Min. scorer distance: 165mm (one set scoring tool)
- Order change time: 3 to 5 seconds



- Slitting and scoring base movement coordinates with single screw and 400W servo motor
- Using gear transmission



- These types lower scoring tools: male, flat, female
- Stagger scorer changing



- Slitter movement by electric cylinder
- Using infrared to calibrate the starting point of blade point



- Slitting pad wheel with independent transmission design

## Rotary Shear with Edge Cut RSC-6 Diverter Device



Rotary Shear with Edge Cut RSC-6



Diverter Device



- Cutting Speed: 180M/MIN
- Rotary Shear with edge cutter function, cutting partially both side of paperboard let the trim to be sucked into suction pipe, waste paper can be discharged smoothly
- Automatically adjust the cutting knives position for the working width
- Apply auto order change system reduce the cutting length difference and trimming defective product caused by drifting

- Cutting speed: 200M/MIN  
Minimum cutting length: within 800MM
- Discharge defective products without rotary shear, avoiding loss caused by paper tail flick and speed down
- Discharge waste paper at 200m/min speed to enhance production efficiency

## N.C. Helical Cut-off NC-C84H/NC-C158H Double drive helical cut-off: Continuous Max. cutting speed 350m/min. 400m/min

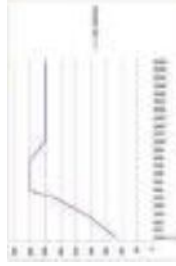


### N.C. Helical Cut-off:

- Adopt with double drive motor, cutter circumference: 810mm
- Mechanical Continuous max. speed: 350m/min, 400m/min
- Two measuring wheels design that with high cutting accuracy. Accuracy:  $\pm 1.0$  mm.

- Individual motor control the paperboard in and out, neat and stable output for the board.
- The aluminum alloy blade base closely attached with helical surface and bearing unit of blade shaft, tightly work with outer blade shaft. Increase the cutting ability and extend the knife lifetime.
- Special knife adjustment structure. Save time and labor of knife micro adjustment.

Model 400 cutting speed feature table(double motor 79KW\*2)



| 刀宽 (mm)      | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 最大速度 (m/min) | 350 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 350  |
| 最大长度 (m)     | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |

Model 350 cutting speed feature table(double motor 42KW\*2)



| 刀宽 (mm)      | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 最大速度 (m/min) | 350 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 350  |
| 最大长度 (m)     | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |

(Remark: These feature apply for 1.8M/2M/2.2M/2.5M machines. These digit above are for reference only, depends on actual working condition.)

## Smart Leveling Control System for Anti Cardboard Bending

The sensing and computing technology with built-in expert closed-loop control system, the Cruise with professional process control guarantee the high speed production and best

### Synchronize Process Control

It-in process control system, assure paperboard quality



### Flatness Diagnostic On-Line

On-line detection and adjustment according to AI computing



### Anti-warp Control



Improve delaying adjustment, lack of strategy technology and not efficient by inert

### Visualized Report



Aim at shifts/flute-type/warping status, visualized analysis bending condition

## Single Auto Downstacker DSK-75/9S

Stack and order switch at the highest production speed to ensure products of any type and specifications get the best stacking effect at the highest operating speed



### 【Mechanical Configuration】

- Accurate stacking & separation
- High speed stacking & order switching
- Accurate paper production and delivery control
- Maximum speed for any type and specification stacking

### 【Electric control system】

- Precise belt servo control & accurate cardboard separation
- Realize multi-order stacking & small order making
- Match Japanese Mitsubishi high performance servo controller

### 【Performance feature】

- Maximum paper folding length: 3500mm
- Maximum paper stack height: 1800mm
- Maximum paper folding speed: 350m/min
- Actual paper cutting speed: 350m/min
- Stable multi-order stacking, batching & changing
- Stack smoothly & neatly

