

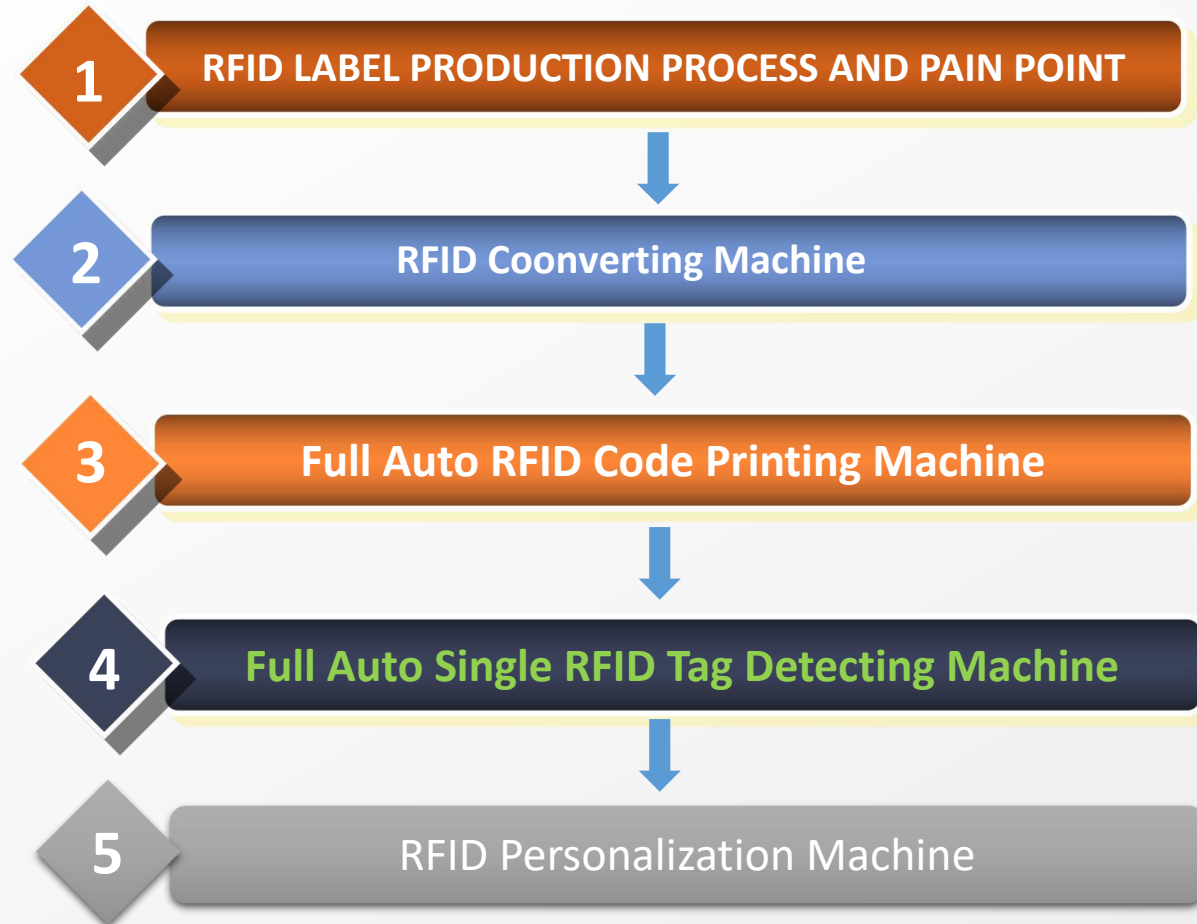
MORE FASTER, MORE PRECISE, MORE STABLE- LUKIOT RFID PRODUCTION LINE

NANJING LUKIOT TECHNOLOGY CO., LTD.

RFID LABEL CARD • PAPER CARD • SMART CARD INTELLIGENT MANUFACTURING EQUIPMENTS PROVIDER

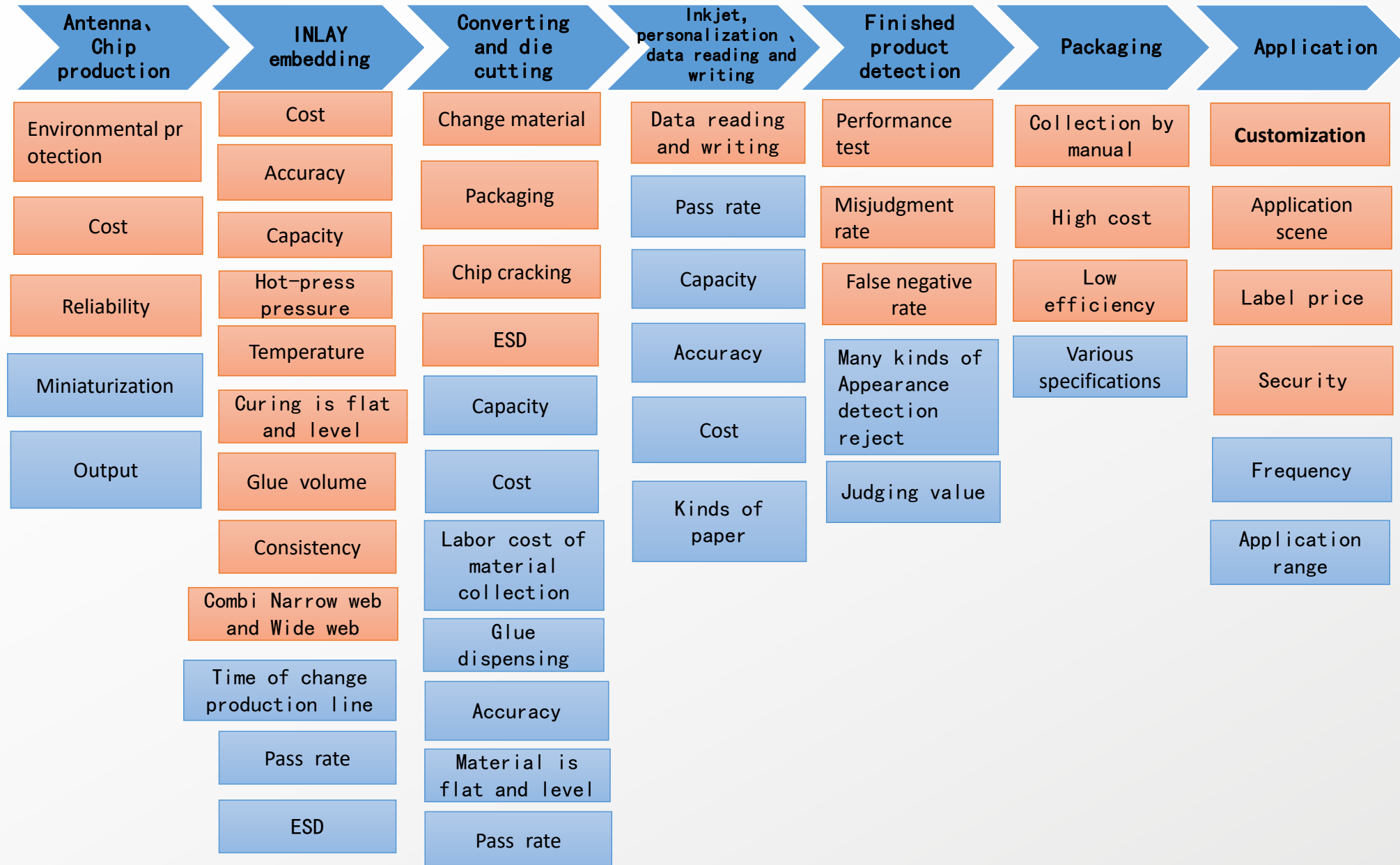


Content

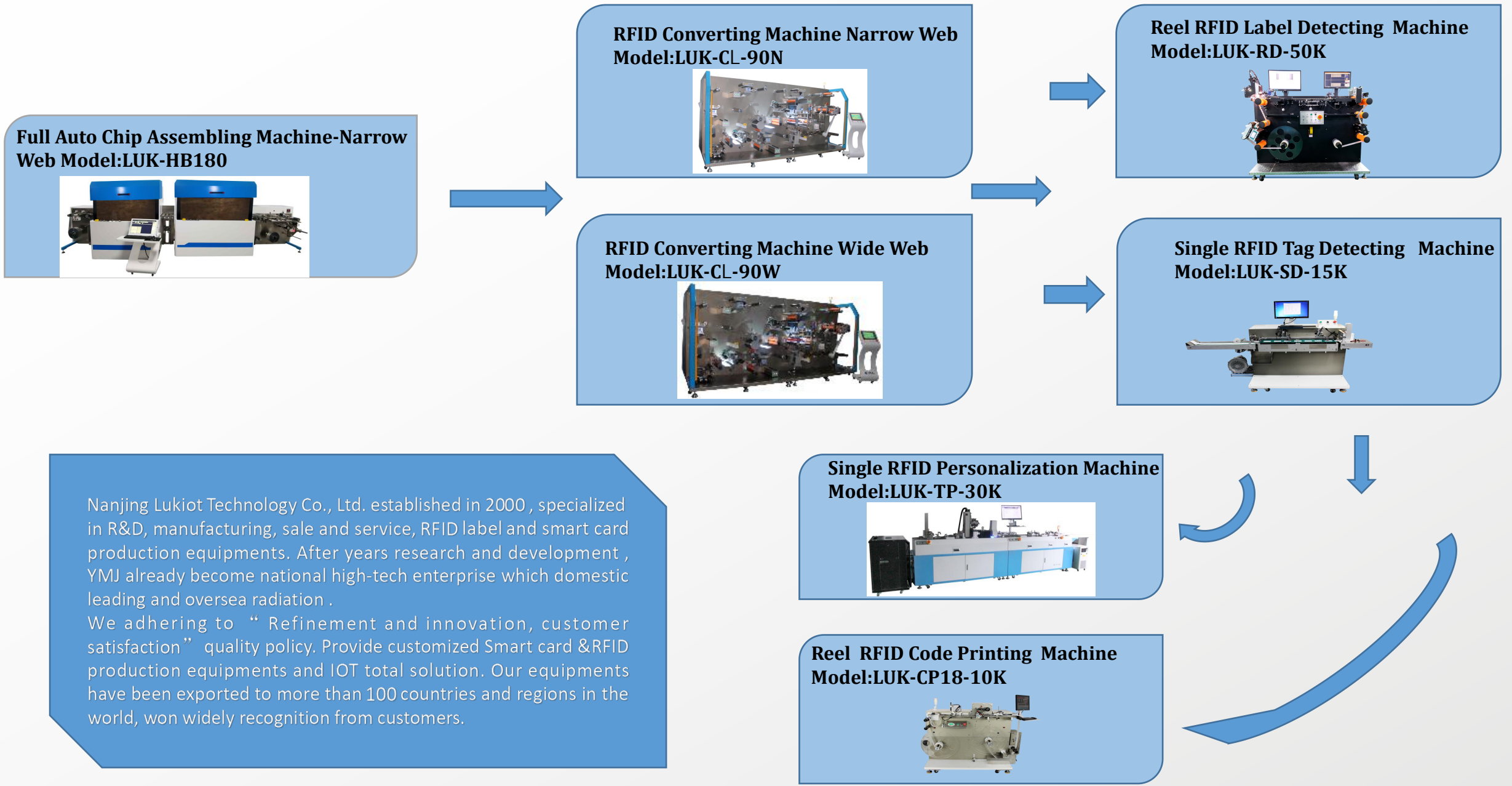




RFID LABEL PRODUCTION PROCESS AND PAIN POINT



Lukiot-General Process for RFID Production





Lukiot-RFID Converting Machine LUK-CM-90 Lukiot



Wide Web LUK-CM-90W

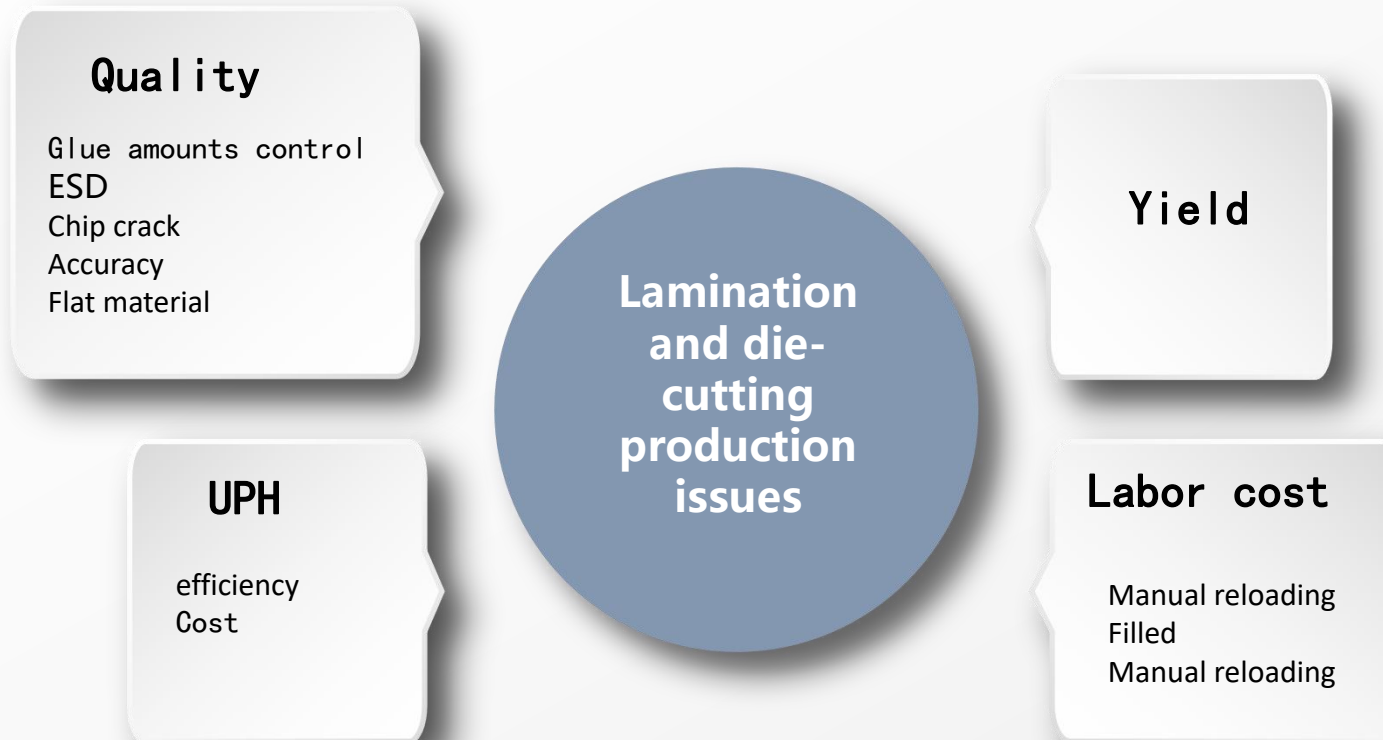
- For wide or narrow web RFID label dry, wet Inlay lamination, die cutting and slitting. 2~5 cutting knives, simple layout switch, match different production process.
- Suitable for the production of different material labels, changing the die cutter can produce the multi-lane baggage tag, ticket and anti-metal label, etc.
- Optional ultrasonic online lamination, edge sealing, producing woven label and washing label.
- Optional with production hang tag, paper card, and unloading online.
- Optional new online reading and writing, detection, inkjet and other personalized functions.



Narrow Web LUK-CM-90N

- It use for narrow web RFID dry or wet inlay lamination and die cutting.
- Changing the die cutter can produce the baggage tag, ticket and anti-metal label, etc.
- Optional ultrasonic online lamination, edge sealing, producing woven label and washing label.
- Optional with production hang tag, paper card, and unloading online.
- Optional new online reading and writing, detection, inkjet and other personalized functions.

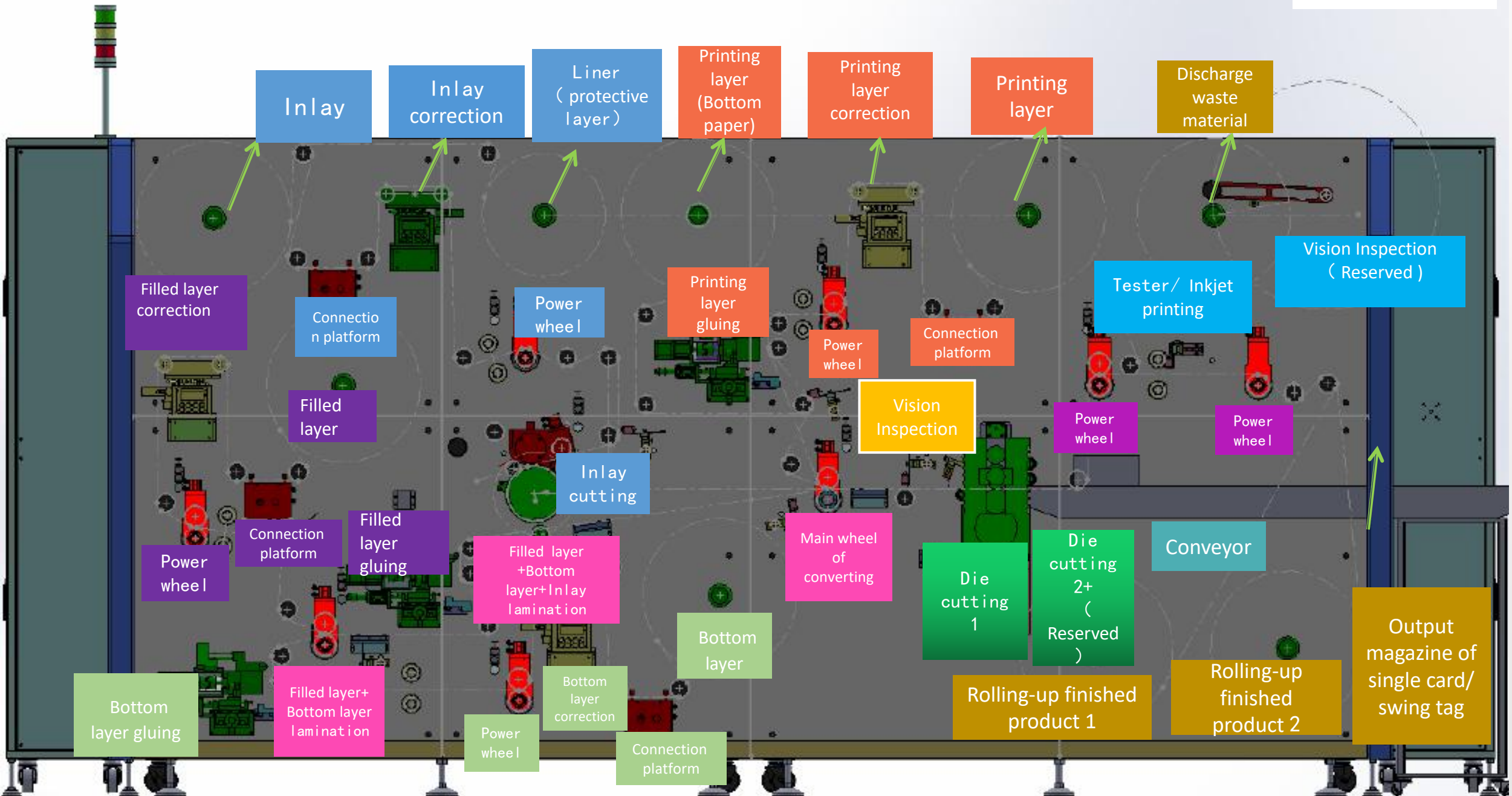
Lamination and die-cutting production issues



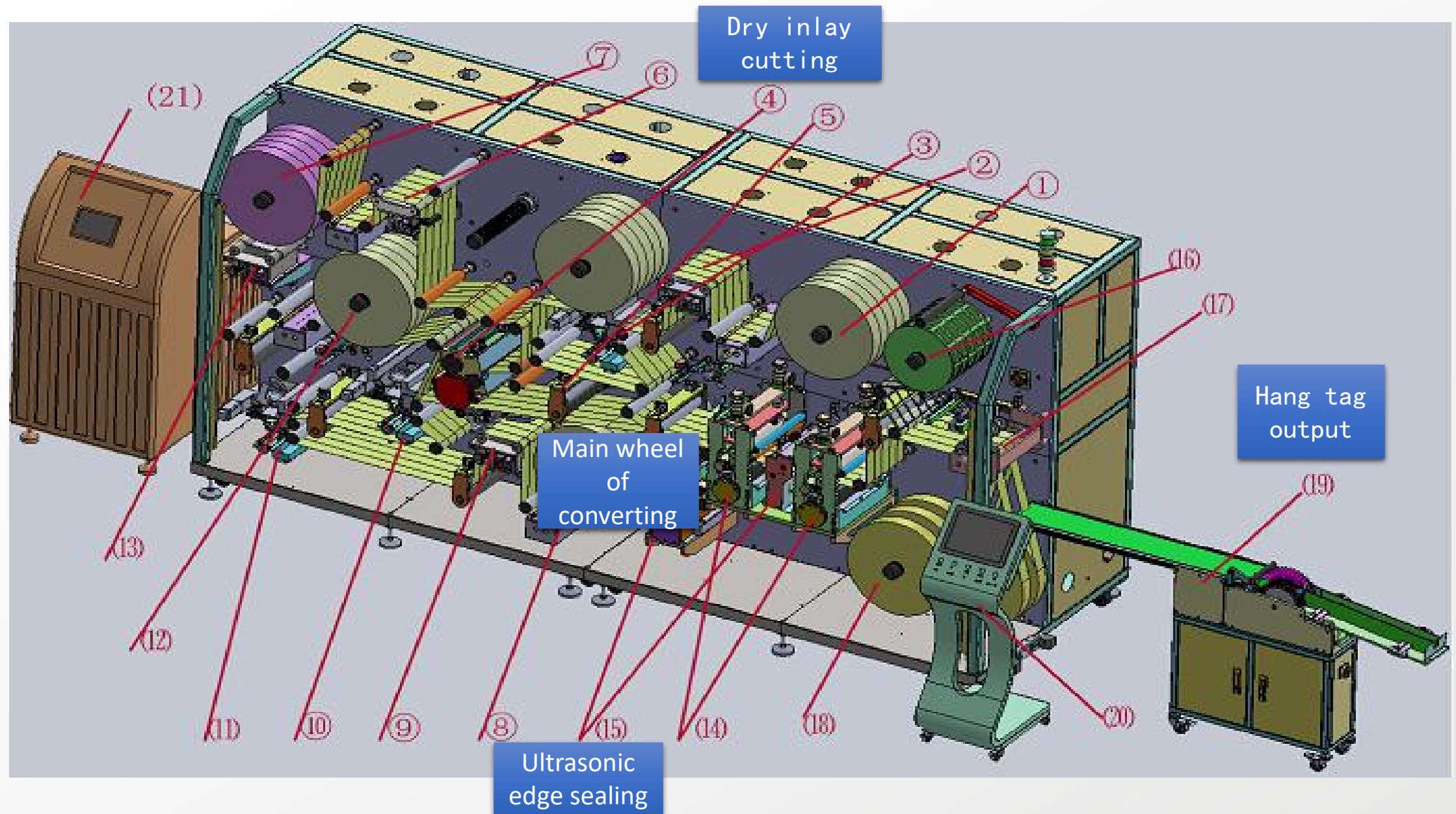
Lamination and die-cutting production issues

- Full auto RFID converting machine is used for label converting and die cutting, 2 layers or 4 layers of roll to roll dry and wet inlay converting with label is optional.
- Inlay converting and die cutting with balance or imbalance printing layer just need to setting in software.
- It integrated of online gluing, converting, die cutting ,woven label ultrasonic sealing, and testing all in one.
- Suitable for reel label 、 paper card、 hang tag、 fan fold card、 woven label and baggage tags and other product production.
- The solution of full auto modular system and multi-axis system which equip with Multi-axis synchronization function. Module configuration is reasonable, flexible and humanized combination.
- Machine has multi unit of tension and deviation correction systems which ensure the edges neatly, high output, high quality and high accuracy production for different products.

Function module introduction-narrow web



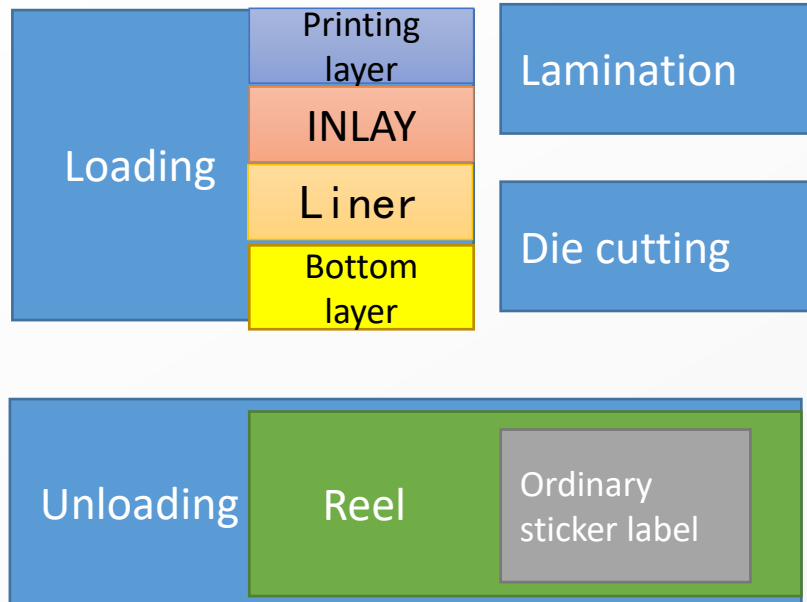
Function module introduction-wide web



- 1) Printing layer loading
- 2) Printing layer correction
- 3) Printing layer gluing
- 4) Inlay cutting
- 5) Alignment and lamination
- 6) Correction
- 7) Inlay loading
- 8) Bottom layer loading
- 9) Bottom layer correction
- 10) Filled layer gluing
- 11) Bottom layer gluing
- 12) Filled layer loading
- 13) Filled layer correction
- 14) Die cutting A & B
- 15) Ultrasonic edge sealing
- 16) Discharge waste material
- 17) Roll material slitting
- 18) Rolling-up finished product
- 19) Hang tag output
- 20) HMI
- 21) Hot melt glue box

Basic function module

Standard function



Optional functions

Wet INLAY labeling

Dry INLAY cutting

Online gluing

Bad/good detection

Slitting function

Unloading

Reel

Baggage tag

Woven label

Hang tag

Single or multi lane

Output collection directly

Fan fold

Single or multi lane

Personalized customization

Ultrasonic woven label

INLAY rejected

Data reading and writing

Product rejected

Online print cursor

Online punching of Filled layer

Vision Inspection

Comparison of key parameters



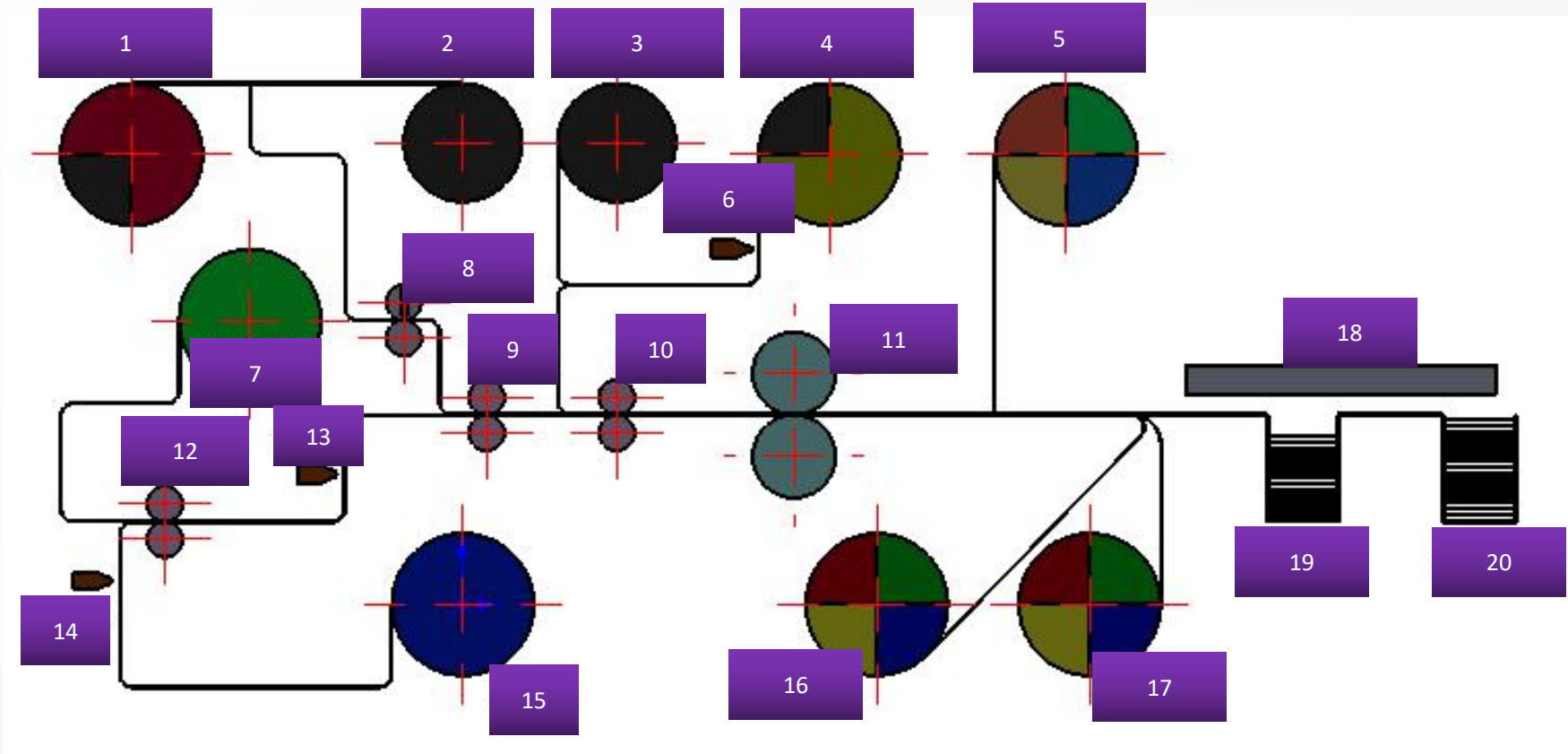
Function/Performance	Narrow web CM-90N	Wide web CM-90W
UPH	Reel label: same pitch: about 60~70m/min different pitch: about 40~50m/min Hang tag: same pitch: about 50m/min different pitch: about 30~40m/min Baggage tag: about 30m/min Woven label: same pitch: about 60m/min different pitch: about 40~50m/min	Reel label: same pitch: about 50m/min different pitch: about 30~40m/min Hang tag: same pitch: about 40m/min different pitch: about 30~40m/min Baggage tag: about 30m/min Woven label (single lane) : same pitch: about 60m/min different pitch: about 40~50m/min
Lamination layers	3	2~4 layers are optional
Width of material	30~150mm	30~350mm
Hot melt glue group	0~3 groups are optional	0~3 groups are optional
Double side adhesive tape	√	√
Unloading	reel label、hang tag、fan fold card are optional	reel label、hang tag、fan fold card are optional
Liner	optional	optional
Dry inlay	Lamination directly or inlay cutting lamination(Standard)	Lamination directly or inlay cutting lamination(Standard)
Wet inlay	optional	optional
Bad/good detection (HF/UHF)	optional (The speed will be reduced to 15~30m/min)	optional (The speed will be reduced to 15~30m/min)
Inkjet printing	optional (The speed will be reduced to 15~30m/min)	optional (The speed will be reduced to 15~30m/min)

Comparison of key parameters

INLAY rejected	optional	optional
Kiss cut/ full cut	√ (Change the die cutting group, adjusting die cutting depth can be achieved)	√ (Change the die cutting group, adjusting die cutting depth can be achieved)
Lamination accuracy	$\pm 0.5\text{mm}\sim 0.8\text{mm}$ (According to different products and different production mode)	$\pm 0.5\text{mm}\sim 0.8\text{mm}$ (According to different products and different production mode)
Die cut accuracy	$\pm 0.5\text{mm}\sim 0.8\text{mm}$ (According to different products and different production mode)	$\pm 0.5\text{mm}\sim 0.8\text{mm}$ (According to different products and different production mode)
Slitting	optional	optional
Application	woven、baggage tag、reel label、hang tag、fan fold card	woven、baggage tag、reel label、hang tag、fan fold card

Working process -4 layers glue coating process

Lukiot

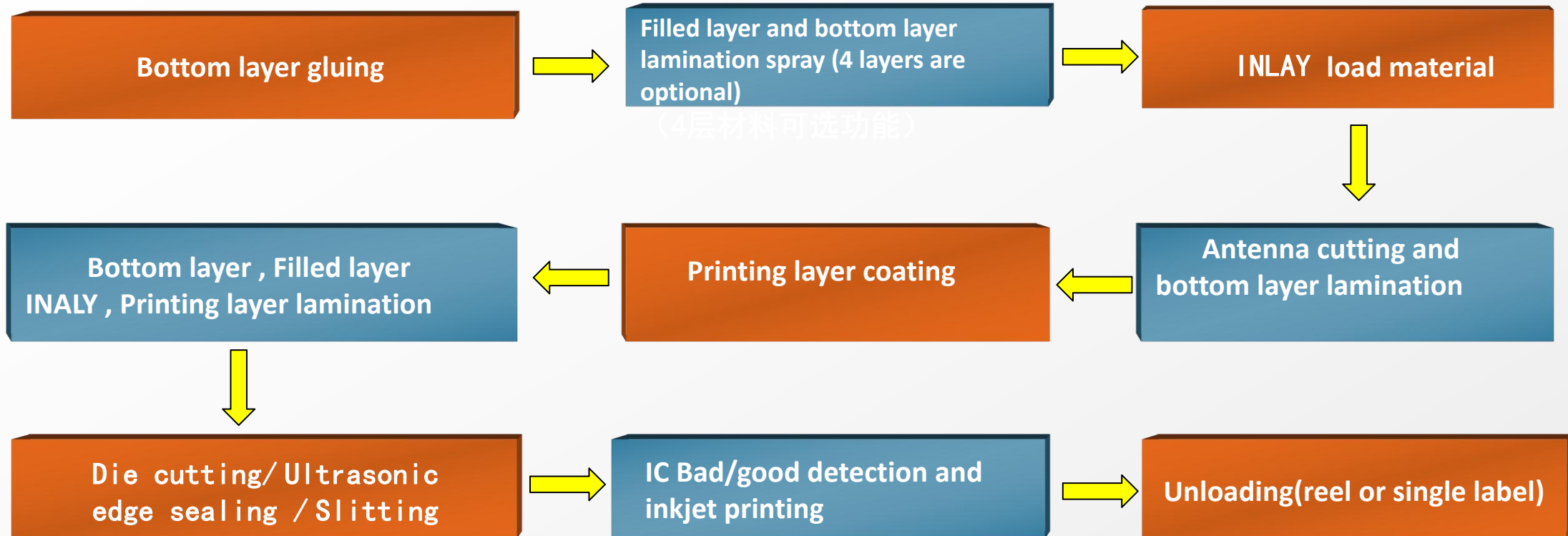


Working process -4 layers glue coating process

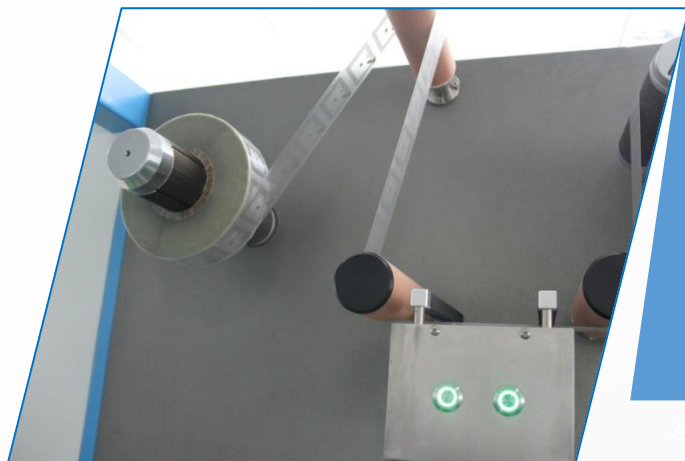


- 1. Inlay
- 2. Interleaving paper
- 3. Waste paper of surface layer
- 4. Surface layer paper
- 5. Waste paper of die cutting
- 6. Adhesive spraying 3
- 7. Packing layer
- 8. Break antenna
- 9. Converting 2
- 10. Converting 3
- 11. Circular knife of Die cutting
- 12. Converting 1
- 13. Adhesive spraying 2
- 14. Adhesive spraying 1
- 15. Base layer paper
- 16. Rolling-up finished product
- 17. Rolling-up finished product
- 18. Detection and card collection
- 19. Bad card
- 20. Collection of finished product

Working process -4 layers glue coating process



Functional structure description



Loading/Unloading Group

- Constant tension retracting roll , Tension control at 1-10N, tension accuracy: $\pm 0.5\text{N}$.
- With independent servo control.
- Break alarm protection.

气胀轴自动充气

Connection Platform

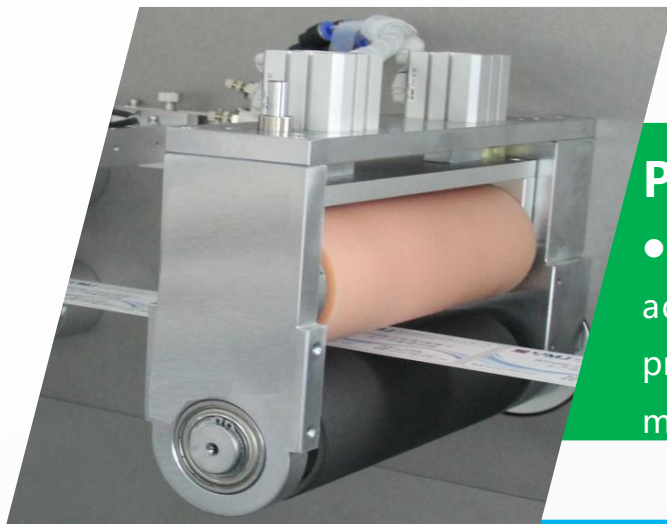
- There is a feeding platform in each layer, which is convenient for changing.
- User-friendly design, easy to operate.



Ultrasonic Correction System

- The high-precision correction system is adopted, the ultrasonic sensor is monitored in real time, and the material in motion is corrected in real time. The correction accuracy is $\pm 0.1\text{mm}$, which ensures the composite precision of the label.

Functional structure description

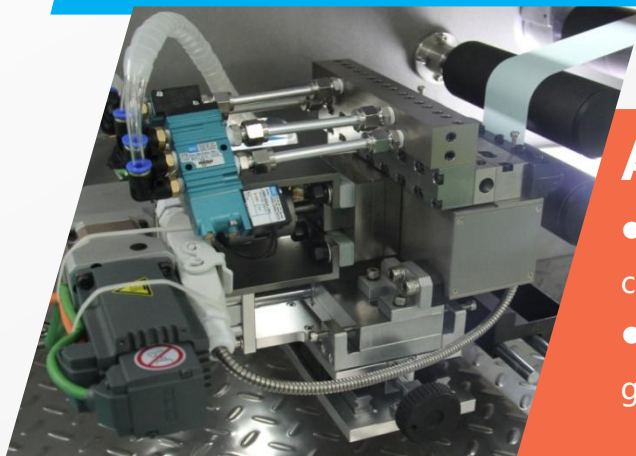


Power wheels

- Each group of power units consists of anti-static and anti-adhesive rubber roller and precision hard oxide roller to prevent chip and material from being crushed during material movement.

Electro-Static Discharge

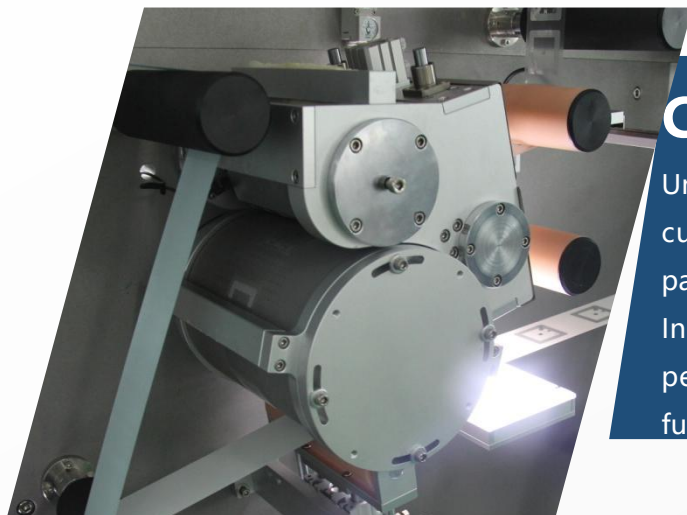
- After the material enters each power group, or composite, after the die cutting station, there is a set of ion static elimination mechanism to eliminate the static electricity generated in the material production and ensure that the chip or material is not damaged by static electricity.



Automatic gluing system

- Depending on the product, equipment 0-3 can be glued, and batch or continuous glue can be selected.
- The high-precision pressure regulating valve ensures the stability of the glue amount when the production speed is switched.

Functional structure description



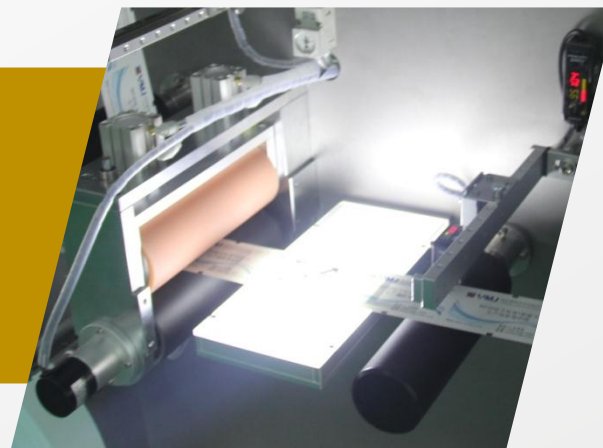
Cutting /Labeling

Unique cutting mechanism, in the production of different spacing antenna, antenna can be cut off, and then transferred to the coil, sensor monitoring position, spacing can set parameters, flexible and convenient.

In the production of wet Inlay, this mechanism can work with the labeling mechanism to peel off the wet Inlay and transfer it to the strip to realize the transfer of wet Inlay (this function is not optional).

Online visual system detection

- After each layer of material is compounded or die-cut, a vision system can be added to detect the size of the composite and die-cutting on-line, and the alarm is automatically stopped.

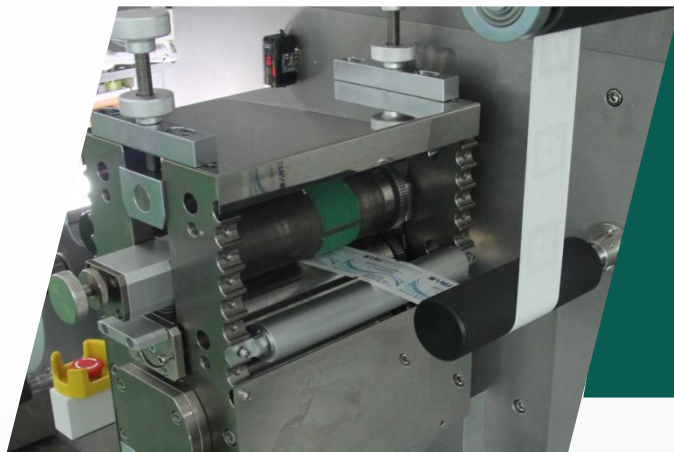


Lamination group

- The composite mechanism adopts anti-static, anti-adhesive, anti-pressure rubberized roller and fine metal roller to ensure the product is not damaged and runs smoothly.



Functional structure description

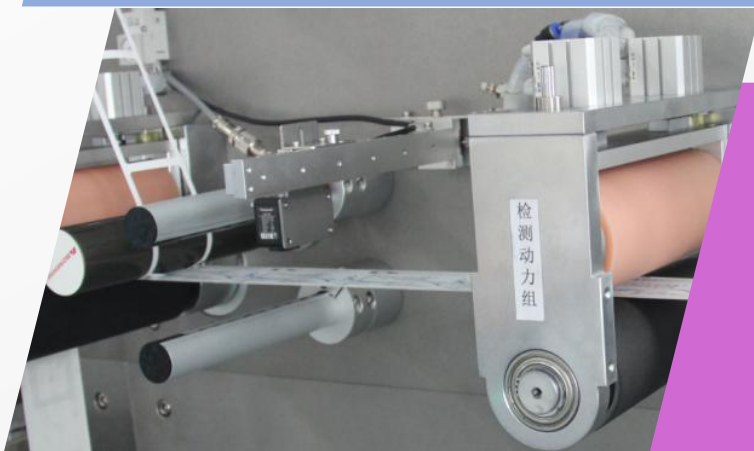
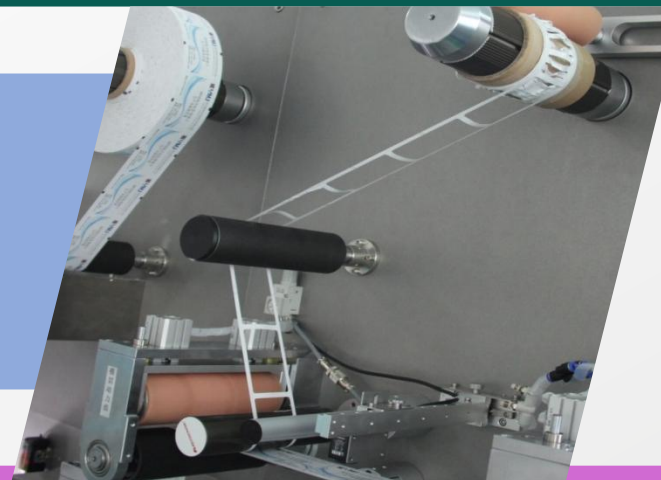


Die cutting group

- High-precision round die cutter, 2-3 sets of optional, high-precision sensors for precise positioning to ensure die cutting accuracy .
- Different shapes of die cutters are available for different products. Full or half cut can be selected for the roll label or tag.
- For small batch orders, an optional strip pull-down mechanism is available to adjust the die-cut spacing.

Waste Collecting

- The waste is automatically collected after die cutting, and the coils are collected neatly.

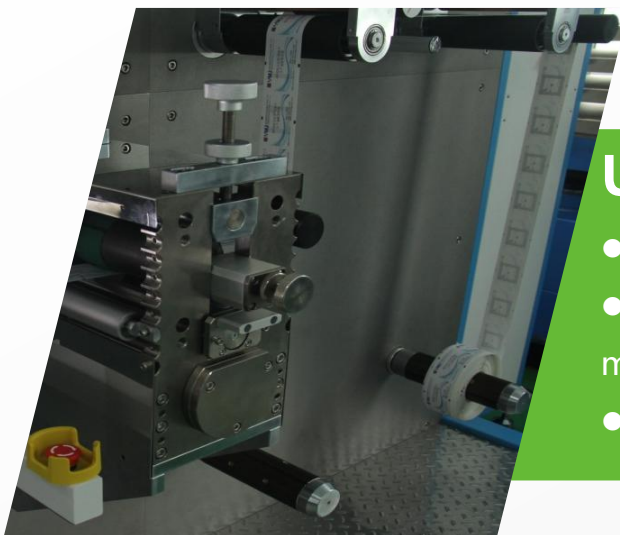


Bad/good detection and inkjet printing (optional)

- HF or UHF card reader is optional, and the chip detection before receiving the chip.
- Bad mark inkjet dot making sign.
- Multiple sets of inspection and marking can be added after double-row or above product slitting.



Functional structure description

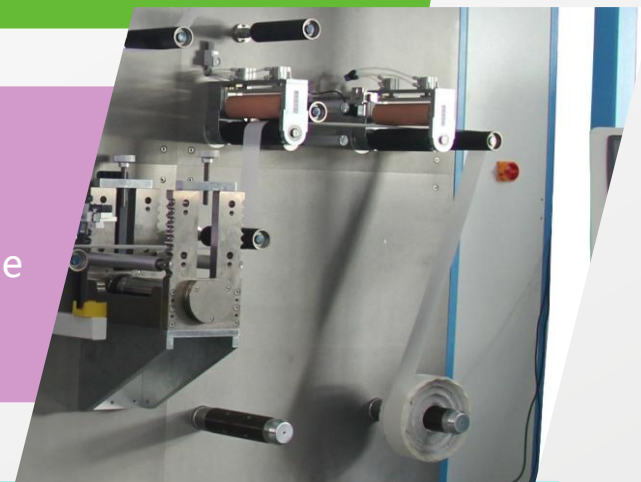
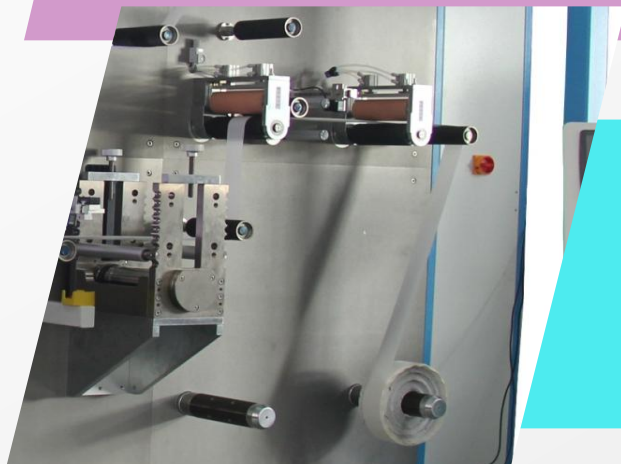


Unloading

- Constant tension winding.
- Expandable station order roll or multi-volume material according to demand.
- Gas rising shaft automatic inflation.

Paper card or hang tag conveyor

- Reserve cards, tickets or tag transfer stations, can be customized according to demand.

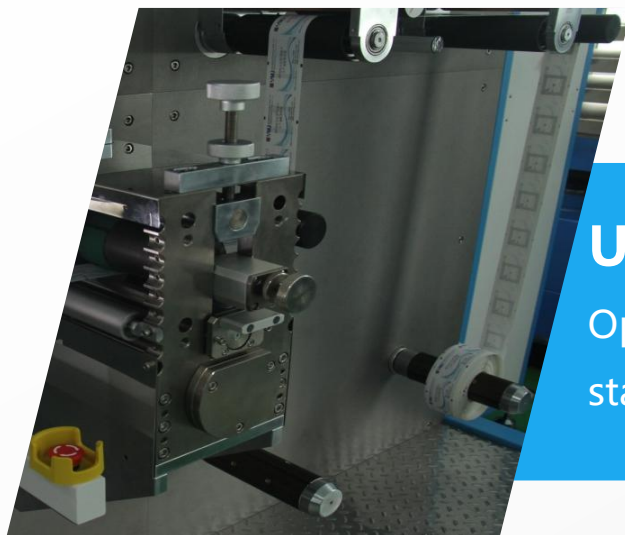


Paper card or hang tag collect

- According to different products, you can add cards or tags, bill receipts.



Functional structure description

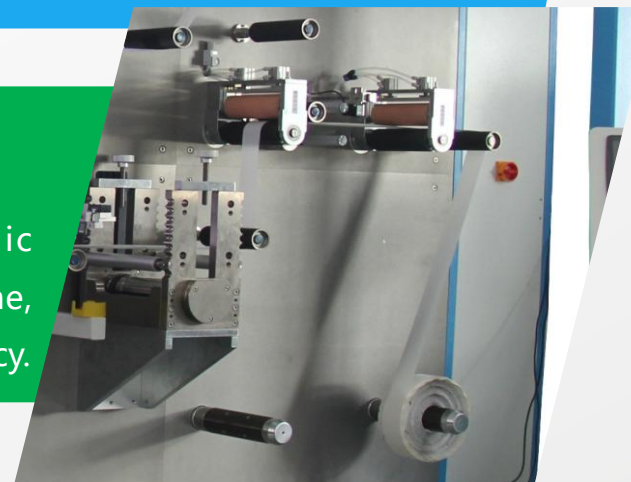


Ultrasonic edge sealing

Optional ultrasonic marking edge sealing function, stable ultrasonic, ensure edge sealing accuracy.

Pressure sensor

- The die-cutting mechanism is equipped with a hydraulic detection system to detect the die-cutting pressure in real time, control the die-cutting depth, and ensure the die-cutting accuracy.



Rubber roller gap fine adjustment mechanism

- The gap between each group of composite rollers can be adjusted according to different products through the barometer. The adjustment range is 0~2mm and the adjustment precision is 0.05mm.



Main configuration



Controlling system	Bus control (drive control integration)	Servo system	Made in China
Vacuum pump	Made in China	Cylinder	SMC
Reader	Impinj (UHF) Deca /FEIG (HF)	Guide strip slide	HIWIN
Power supply	MEANWELL	Solenoid valve	SMC
Vacuum generator	SMC	Tension control	Domestic/imported optional
Visual system (optional)	Domestic/imported optional	Geared motor	Made in China
Ultrasonic Correction System	Domestic/imported optional	Gluing system	Domestic/imported optional

Technical parameters-Narrow web

Overall Dimension	About L4820*W1230*H2200 m
Weight	About 2500kg
Power Supply	AC380V 50/60HZ 70A
Power	About 35KW
Air Pressure	6KG/CM ²
Air consumption	About 300L/MIN
Control	Bus control (Drive control integration)
Width of Material (Label converting)	20~180mm
Application Materials	Dry/wet inlay(different sizes)
UPH	Reel label: same pitch: about 60~70m/min different pitch: about 40~50m/min Hang tag: same pitch: about 40m/min different pitch: about 30~40m/min Baggage tag: about 30m/min Woven label: same pitch: about 60m/min different pitch: about 40~50m/min
Percent of pass	about 99.7%
Lamination accuracy	±0.3mm~0.5mm (According to different products and different production mode)
Die cutting accuracy	±0.3mm~0.5mm (According to different products and different production mode)
Capacity of hot melt glue machine	35KG
Max. diameter of roll material	Max. 600mm
Slitting	optional

Technical parameters-Narrow web

Overall Dimension	About L4820*W1610*H2000 m
Weight	About 3000kg
Power Supply	AC380V 50/60HZ 70A
Power	About 40KW
Air Pressure	6KG/CM ²
Air consumption	About 300L/MIN
Control	Bus control (Drive control integration)
Width of Material (Label converting)	20~350mm (Or custom)
Application Materials	Dry/wet inlay (different sizes)
UPH	Reel label : same pitch: about 50m/min different pitch: about 30~40m/min Hang tag : same pitch: about 40m/min different pitch: about 30~40m/min Baggage tag : about 30m/min Woven label (single lane) : same pitch: about 60m/min different pitch: about 40~50m/min
Percent of pass	About 99.7%
Lamination accuracy	±0.3mm~0.5mm (According to different products and different production mode)
Die cutting accuracy	±0.3mm~0.5mm (According to different products and different production mode)
Capacity of hot melt glue machine	35KG (optional)
Max. diameter of roll material	Max.600mm
Wide web slitting	optional

Lukiot Converting Machine Three Advantages

Modularization

1. Reasonable layout, modular design.
2. Reserved roll station, according to different product requirements.
3. Modular design of each function, universal size, according to the actual needs.

Expansion

1. Alternative production of dry or wet inlay (equal or unequal).
2. 0~3 group glue optional.
3. Die cutting station is optional, carving knife and magnetic roller compatibility, suitable for different production requirements.
4. Optional HF and UHF on-line detection, code-writing and inkjet printing.
5. Optional ultrasonic label sealing function.
6. Optional reel label, woven label, ticket card, hang tag and other products production and automatic collection.

Simplification

1. Production of different products, only need to adjust the software parameters, the replacement of die-cutter and other parts of hardware.
2. Structural design modular, user-friendly, easy to replace.
3. Each correction, tension control, pressure control, glue parameters, product data and other software matching convenient, simple to use.
4. Provide factory parameters table of standard products, which can quickly switch products.

Comparative advantages



- 1、 Similar converting machine, the highest UPH ;
- 2、 Strong versatility, compatible with single-lane or multi-lane, reel label, hang tag, production;
- 3、 Simple operation, low requirements for employees, quick product switching;
- 4、 Friendly HMI interface, easy to operate and alarm automatic;
- 5、 Flexible machine, high compatibility, according to the need to compound 2-4 labels. Optional 0-3 groups of adhesive.
- 6、 Strong expansibility, optional chip quality detection function, vision system, cutting mechanism, die cutting and other functions
- 7、 Material collection can be optional reel label, hang tag.
- 8、 According to different product requirements, the material width, narrow range is optional.
- 9、 The machine has many emergency stop switches, which can be pressed to stop the machine in time in case of emergency.
- 10、 Single station independent test module, easy to adjust and replace;
- 11、 The machine is equipped with safety grating and protective cover, eu CE standard, to protect the safety of personnel.

Application Products (Part of Samples)

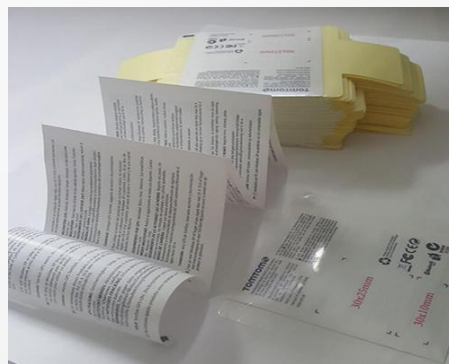
Lukiot



吊牌标签
Hang tag



卷标标签
Reel label



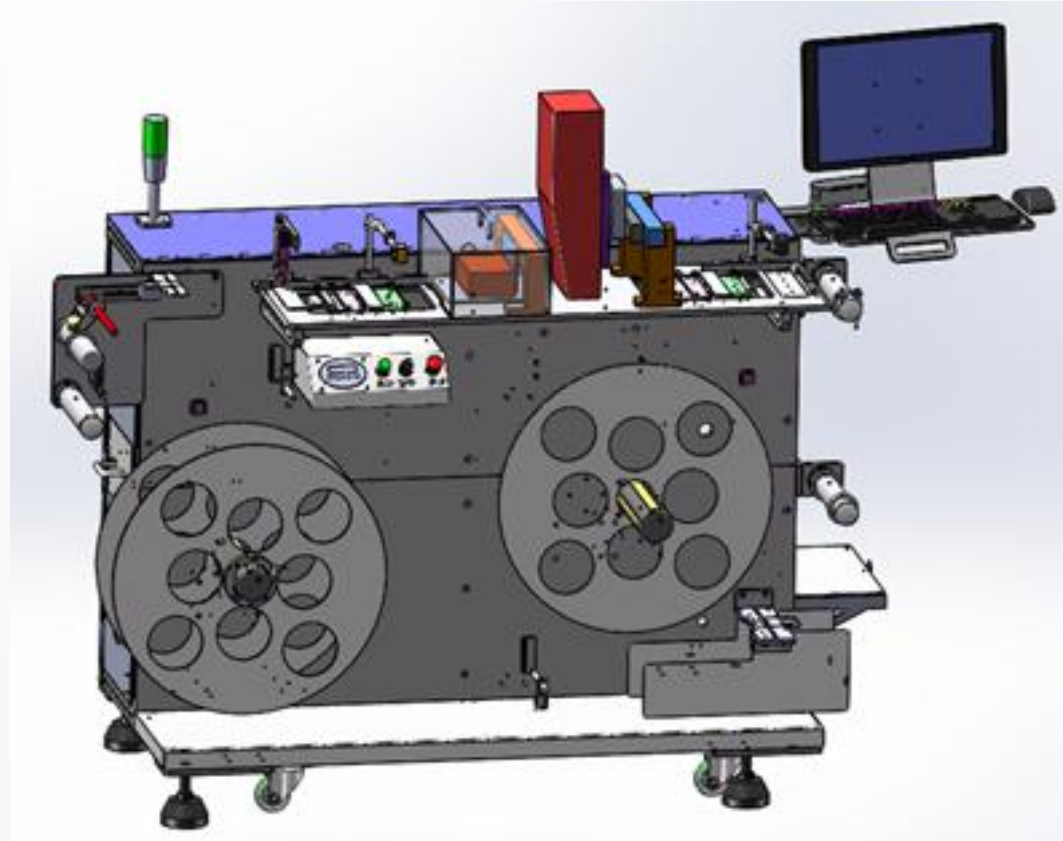
票卡
Ticket/Fan Fold/card



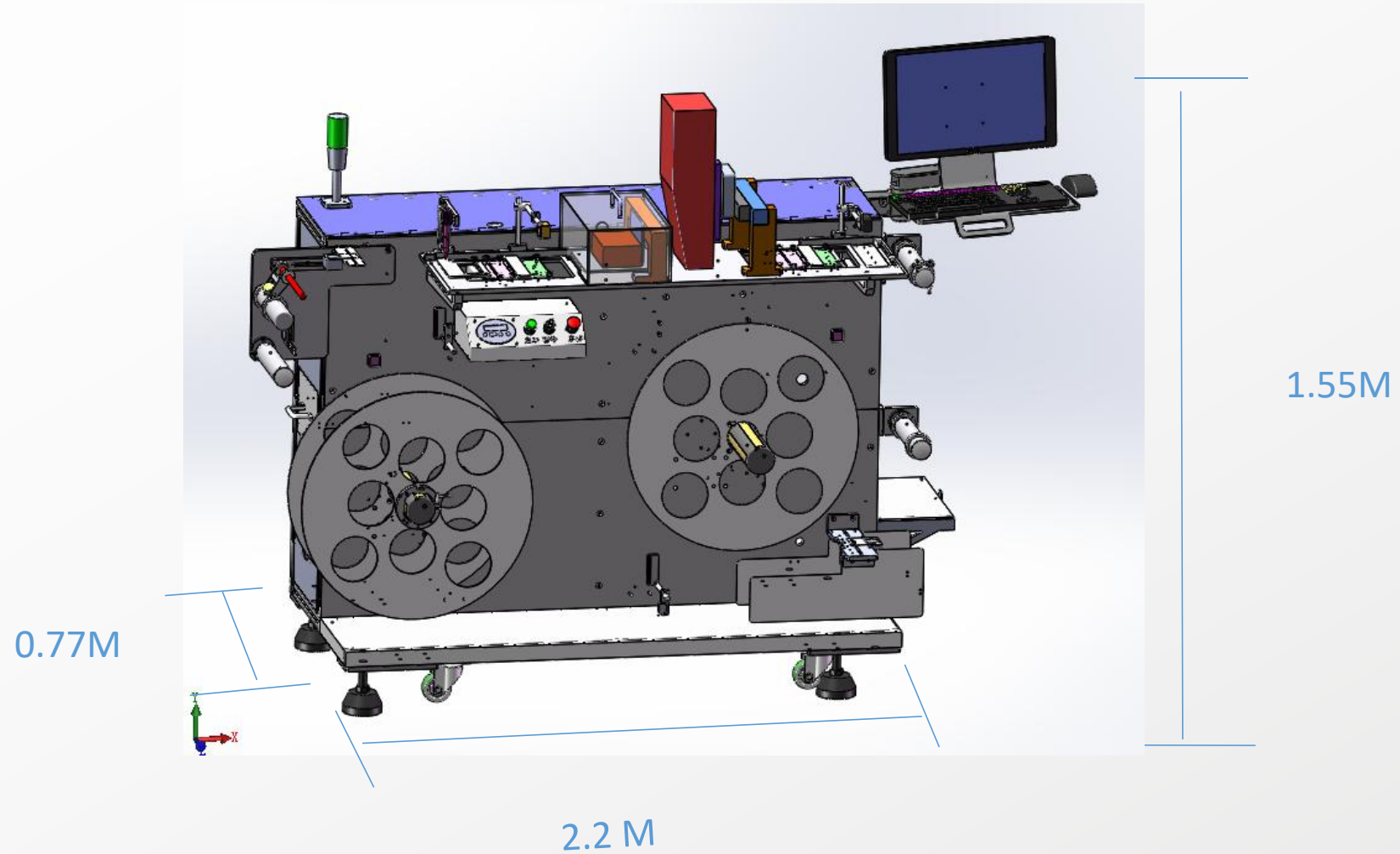
RFID Full Auto RFID code Printing Machine

Lukiot

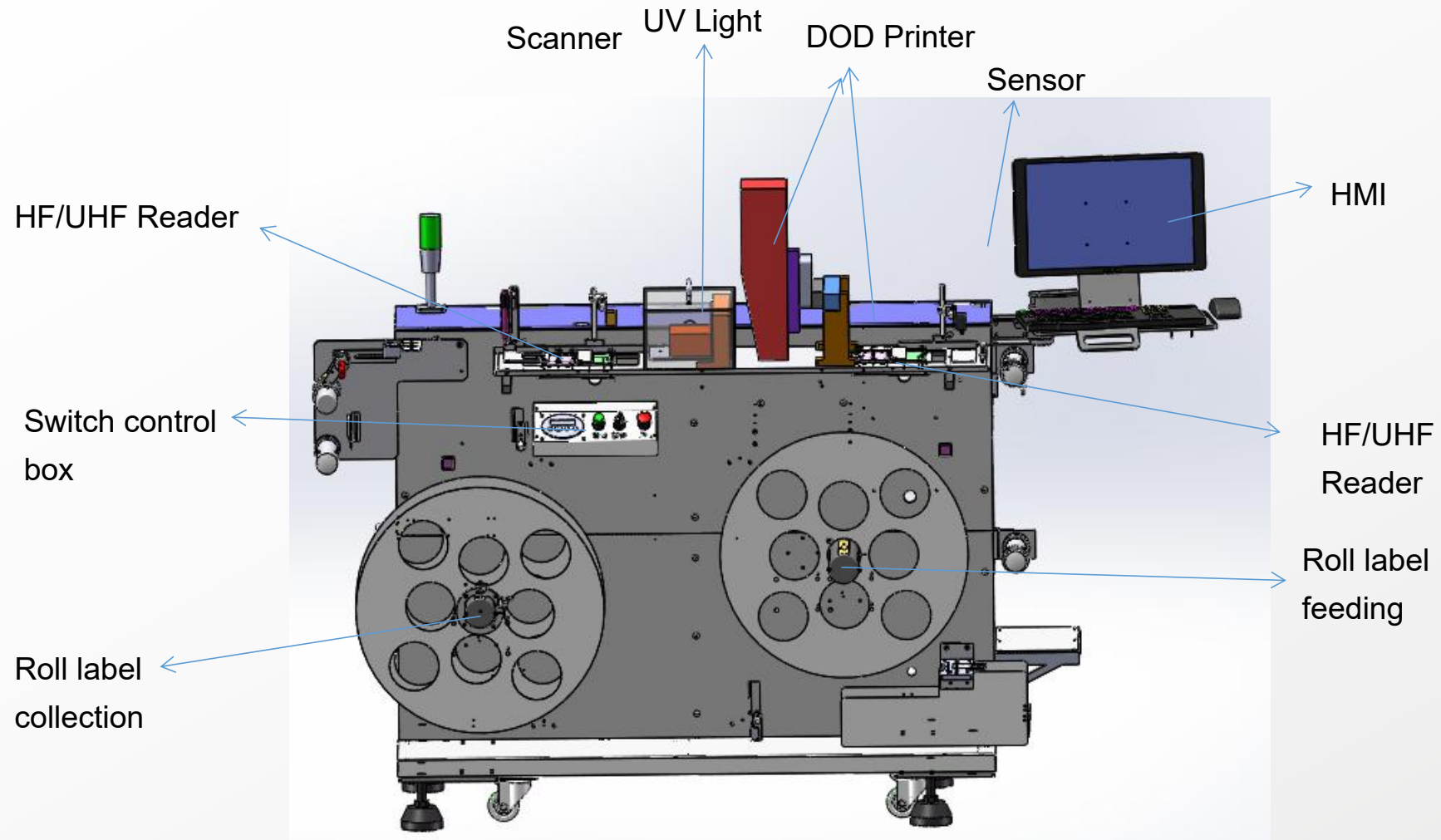
Model:LUK-LCP18-10K



Machine dimension



Machine structure



Function

-
1. Use for printing the numerical code, QR code or bar code on the reel label after read the chip data.
 2. Compatible with thickness of 0.1~0.6mm, width 20~180mm label strip.
 3. Sensors monitoring label position.
 4. Bad labels are marked with marking pen.
 5. Simple structure and convenient maintenance.
-

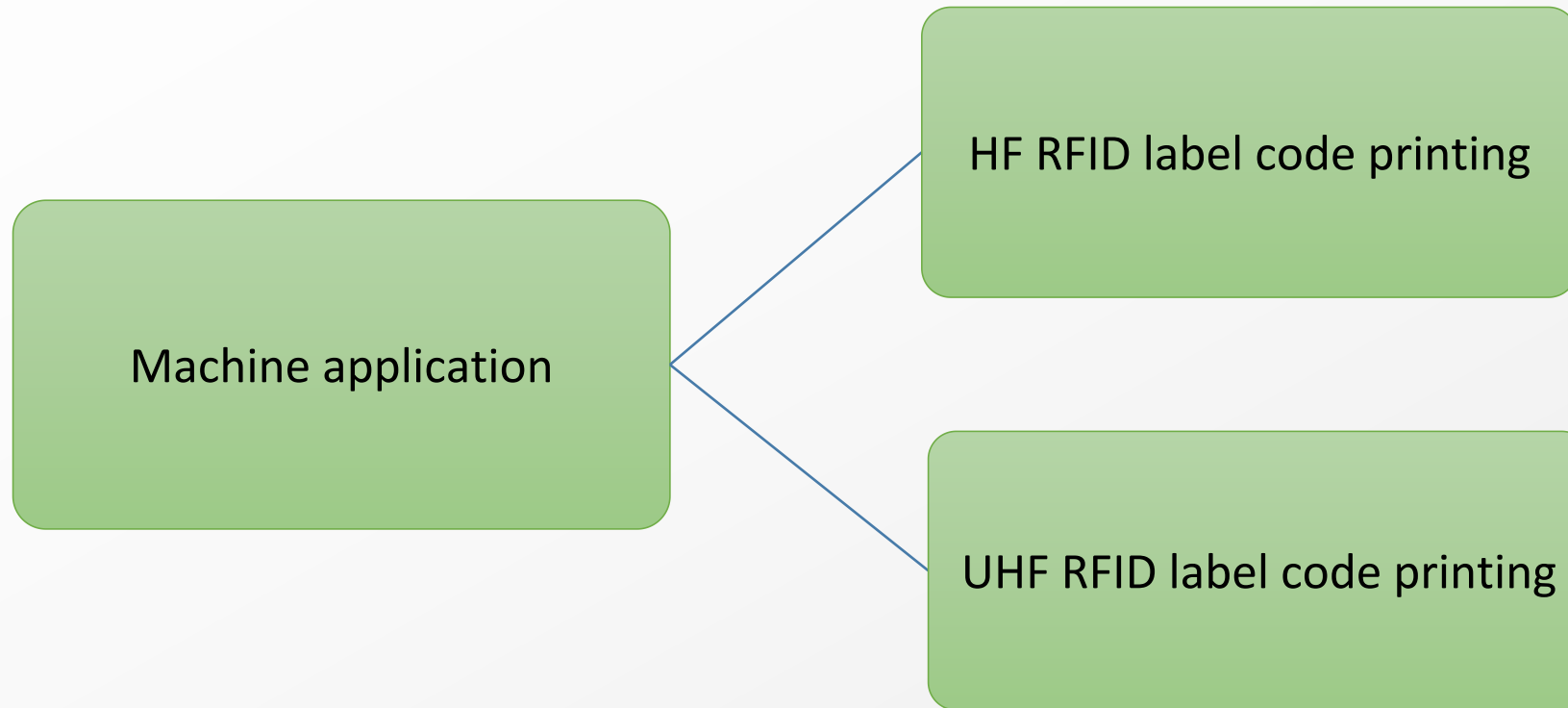
Main configuration

Controlling system	PC	Sensor	Panasonic
Gear motor	TAILI	Cylinder	SMC
HF Reader	Decard	Guide strip slide	HIWIN
UHF Reader	Impinj	Barcode scanner	Newland
Code printer	AROJET	Electromagnetic valve	SMC
Power supply	MEANWELL		

Technical parameters

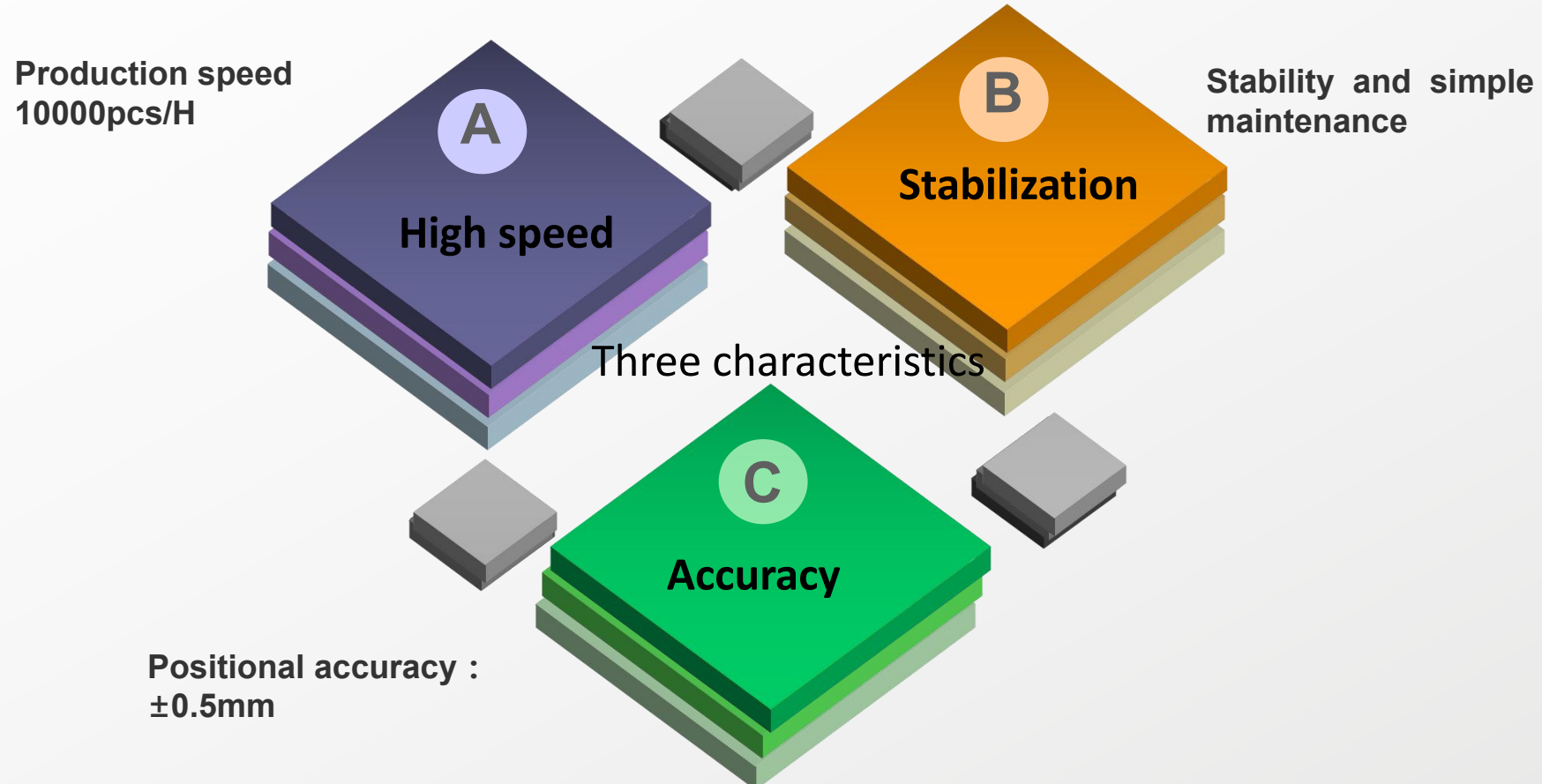
Speed	Encoding is about 7000~10000 pcs/hour (Depending on the size of the label) Detecting is about 8000pcs/hour
Label width	Max.150mm
Label reel outer diameter	600mm
Label reel inner diameter	76mm
Printing position accuracy	$\pm 0.5\text{m}$
Applicable material	Coated paper、 Adhesive Sticker、 PET
Control	PC
Dimensions	2.2m*0.77m*1.55m
Power	0.8KW
Weight	300kg

Application

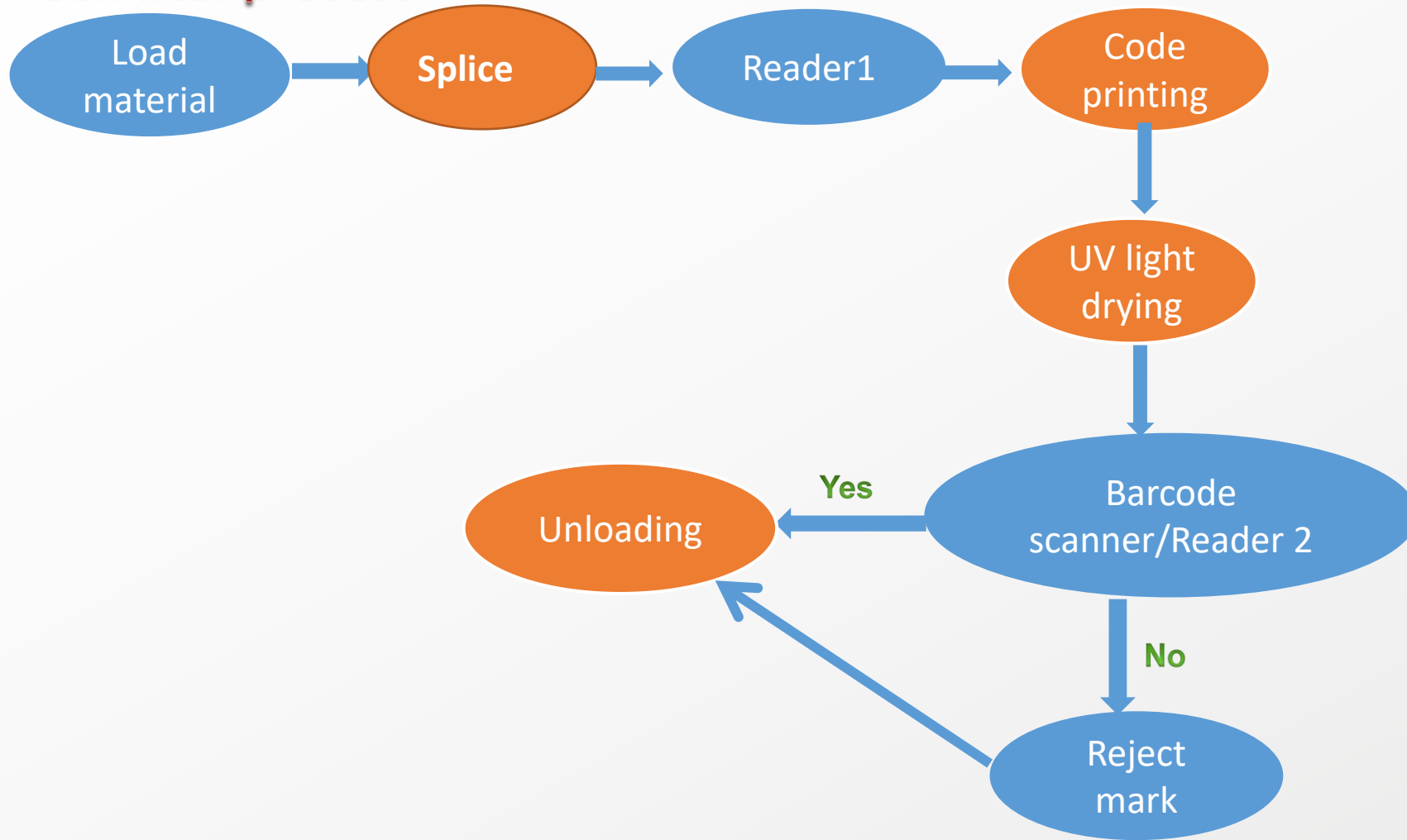


Main features of machine

Full Auto RFID Code Printing Machine is a special equipment for RFID code printing. It reads the chip information of the label through HF/UHF reader Code printing, compatible with different thickness and width of the label strip, simple structure and easy maintenance.



Technical process





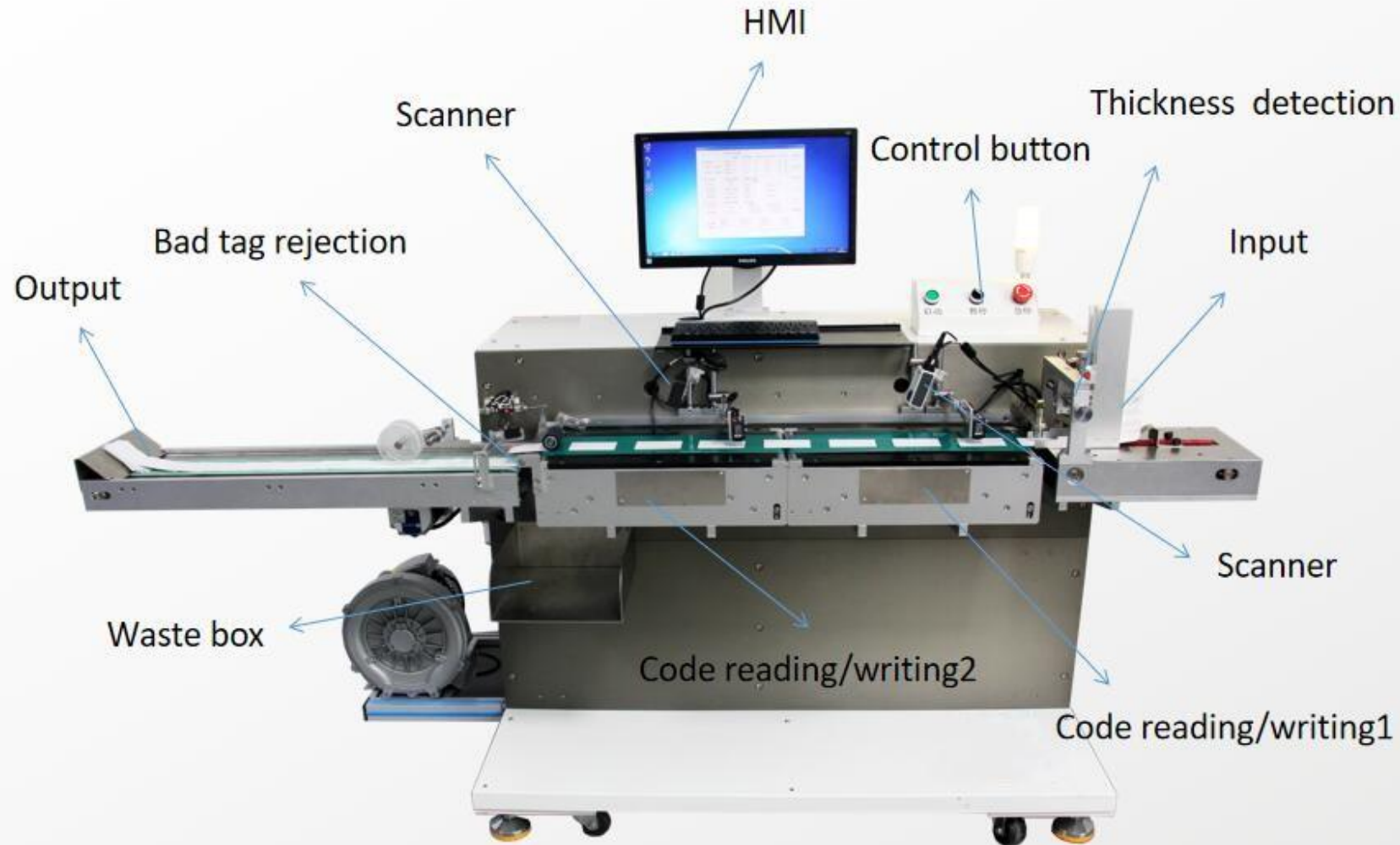
RFID Full Auto Single RFID Tag Detecting Machine

Lukiot

Model:LUK-SD-15K



I. The structure of machine



II. Function introduction and technical parameters

Function

-
1. Use to detecting single HF/UHF tag, code reading/writing/scanning is optional.
 2. Two groups of HF/UHF readers ensure data read-write accuracy.
 3. Simple structure and convenient maintenance.
 4. High stability, multiple sets of electrical eyes to ensure the stability of the system.
 5. Bad tag rejection group ensure the tag quality.
-

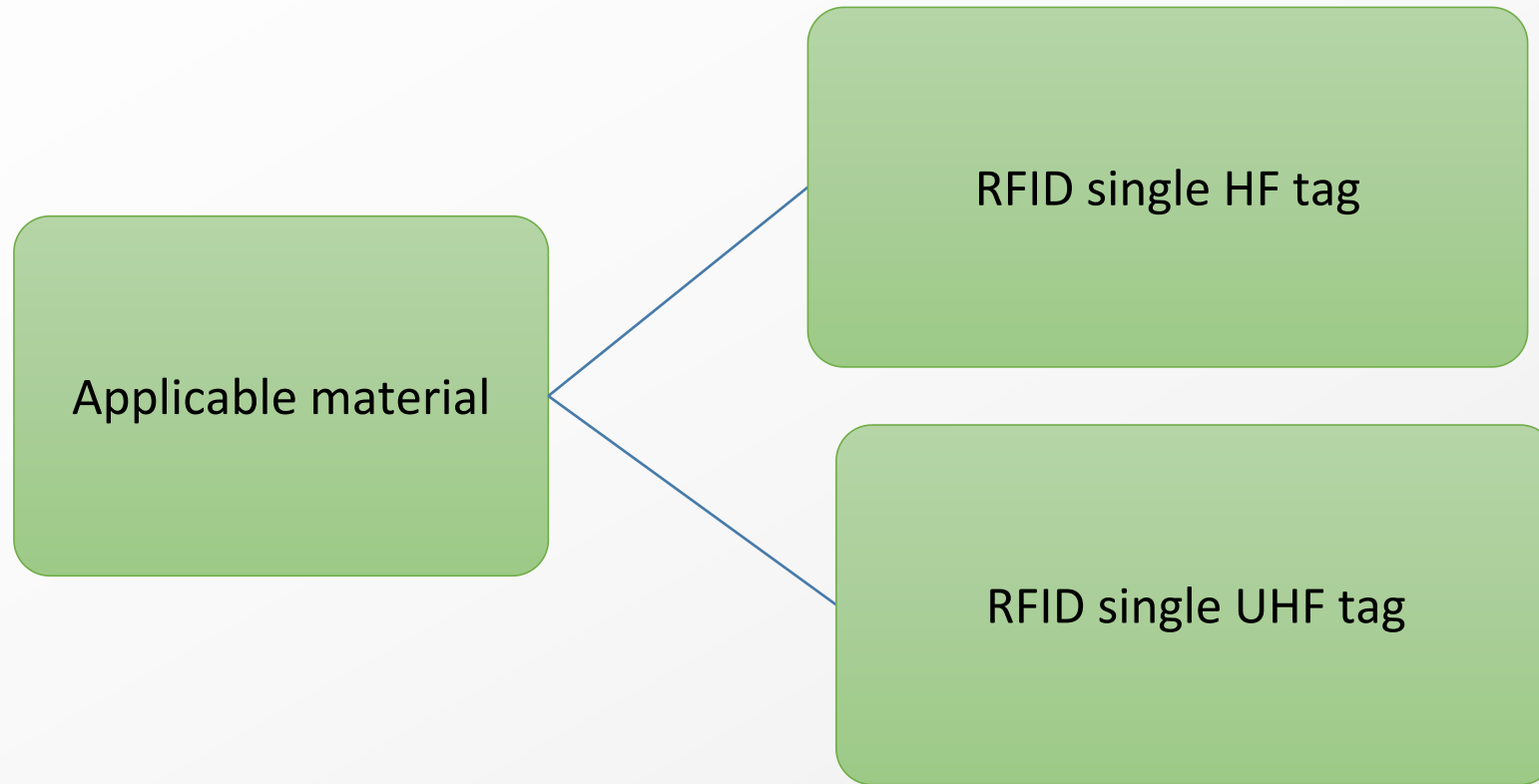
Main configuration

Controlling system	PC	Sensor	Panasonic
Scanner	Honeywell	Stepping motor	Leadshine
Servo motor	Mitsubishi	Guide strip slide	HIWIN
HF Reader	Decard	UHF Reader	Impinj
High pressure blower	Make in China	Power supply	MEANWELL
Cylinder	SMC	Ultrasonic thickness detection	SICK (Germany)

Technical parameters

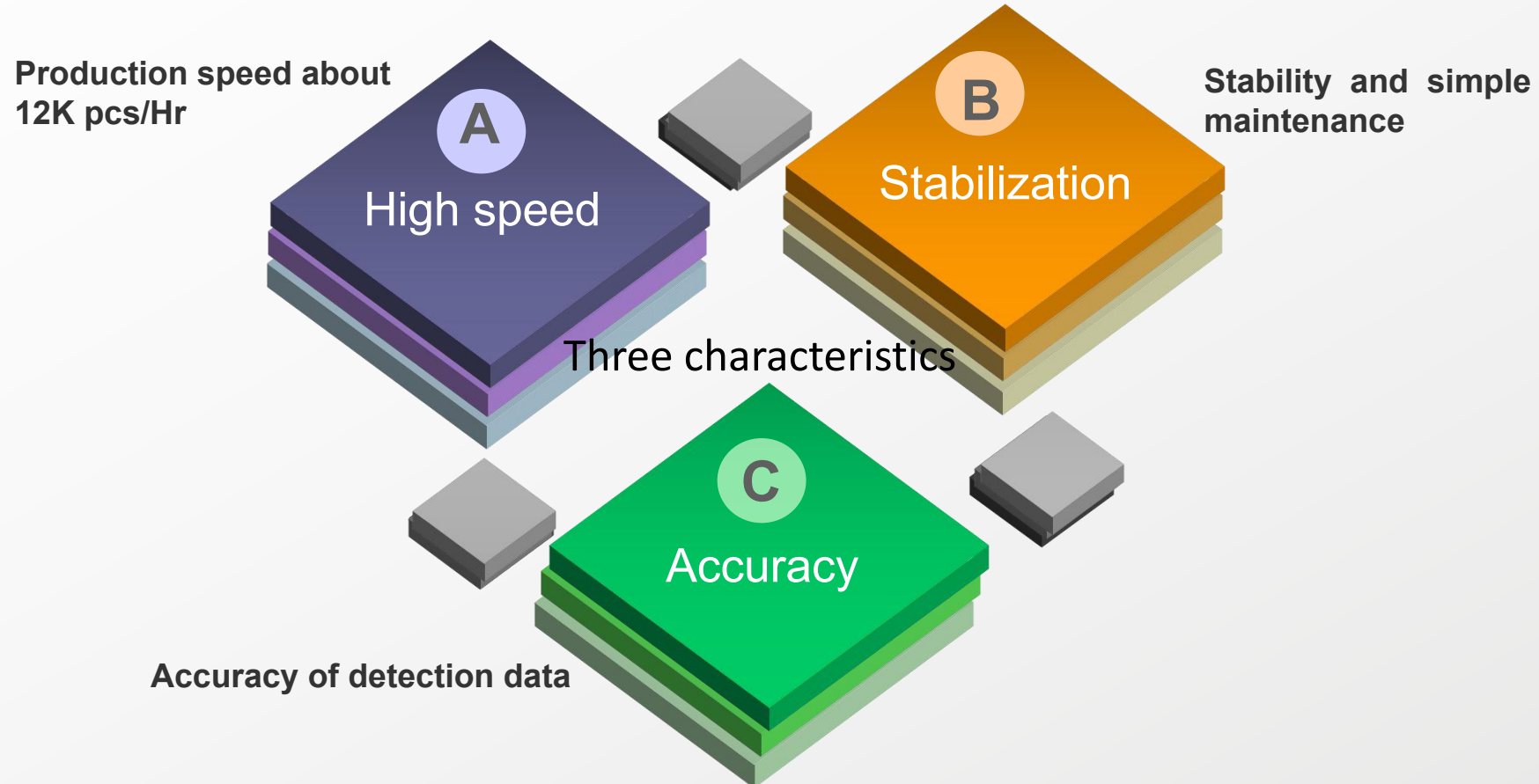
Material width	Min.25mm/Max.110mm
Applicable material	Single tag、hang tag and card etc.
UPH	About 10-15K pcs/Hr
Controlling system	PC
Power	2.5KW
Weight	About 300kg
Overall Dimensions	About L2000*W750*H1500mm
Power supply	About 220V 50/60Hz
Product percent of pass	99%
HF reader (encoding & inspection, correction)	
UHF reader (encoding & inspection, correction)	
embossing function	Inkjet Printing or Laser Printing
scan fuction	Optional
Failure label inkjet printing fuction	Optional
Label Inspection function	Yes
Label repair function	Optional
Cutting function	No

III. Application



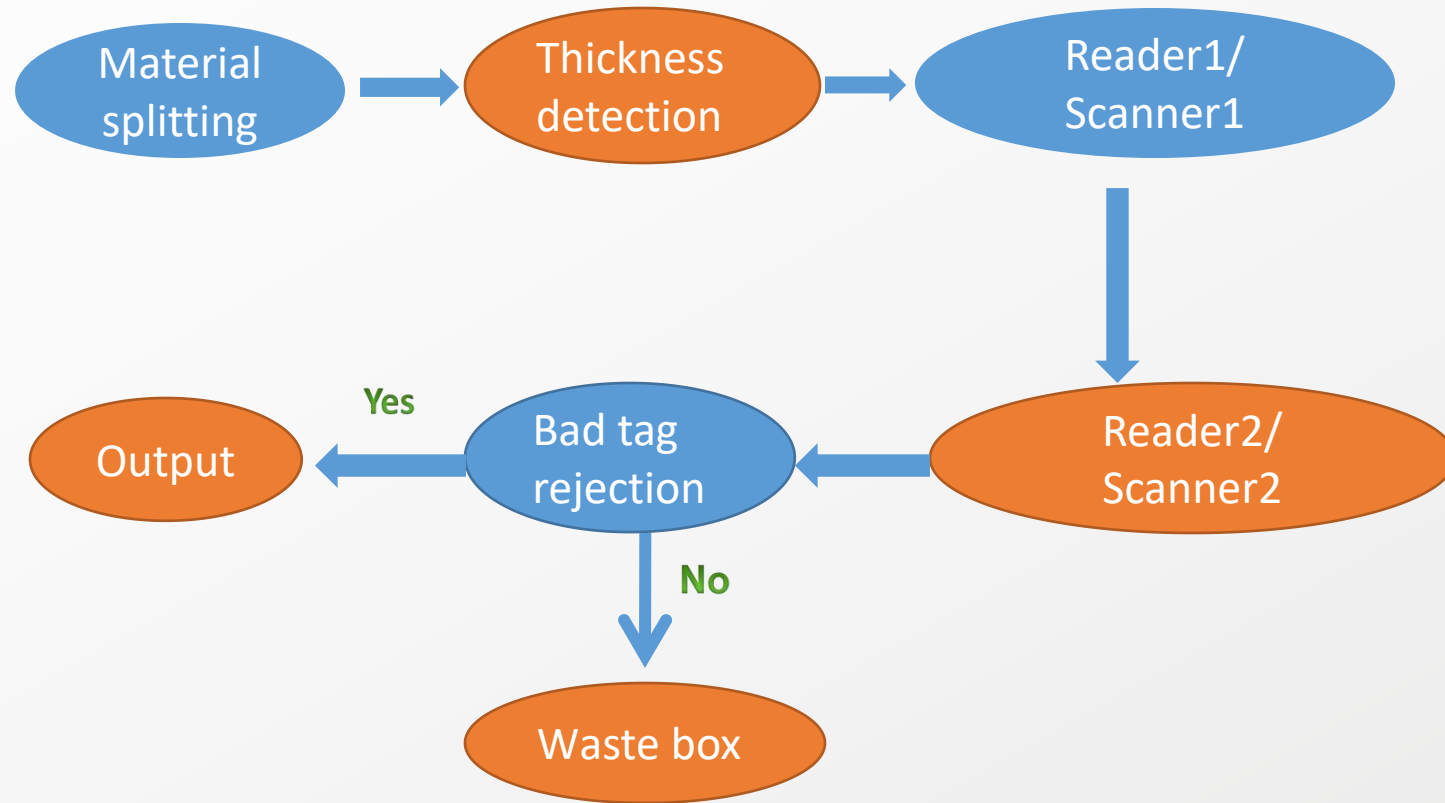
IV. Main features of machine

Full Auto Single RFID Tag Detecting Machine use for detecting single HF /UHF tag, code-writing/ code-reading /code-scanning is optional. Two stations readers and writers ensure data accuracy , and bad tag rejection group ensure the tag quality.



IV. Technological Equipment Flow Chart

Technical process





Create Value & Pursuit Excellence !

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