



Semi-Auto Sheet Gathering & Collating Machine

LUK-ASC-3000

LUK-ASC-3000 is designed for core sheets’ loading manually, but overlay film’s loading , sheet gathering, adjusting , spot welding automatically .



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INTRODUCTION

Lukiot’s ASC-3000 is a semi-automatic sheet collating system.

It mainly includes one sheet loading table, two sets of upper & lower position of overlay roll material unwind stand with air shaft & magnetic brake,sheet gathering & positioning , ultrasonic welding stations, cutting and output stacker, etc.

The high precision optical collation process makes this machine suitable for contactless, dual interface and other high level cards such as ID or EMV Cards.

MACHINE STANDARD CONFIGURATION

S.N.	Standard Configuration	Q. T.Y. ( group)	Function & Description
1	Sheet Loading Table	1	Movable table with wheels, for storage of multiple sheets
2	Top Roll for Applying Upper Overlay	1	To unwind overlay film or magnetic overlay from roll. ▪Easy to load and change new roll; ▪With film tension adjustment devise to keep the film tight; ▪With anti-deviation device to adjust the position of magnetic film.
3	Bottom Roll For Applying Lower Overlay	1	To unwind overlay foil reel. ▪Easy to load and change new roll; ▪With film tension adjustment devise to keep the film tight; ▪With anti-deviation device to adjust the position of overlay film.
4	Magnetic Positioning	1	To adjust the position of magnetic films and avoid any deviation
5	OCR Visual Positioning	3	OCR to check the position of layers and sheets’ holding plate with X, Y axes and rotate direction positioning function.
7	Dust-elimination System	1	To remove dust and clean both sides of every sheet before welding.
8	Sheet Thickness Detection	1	To detect thickness of sheet to avoid wrong quantity during sheet loading , thickness precision can reach 1 um.
9	Automatic Sheet Pick & Placing	1	To position the sheets with OCR camera
10	Automatic Stacking	1	To stack multiple layers together.
11	Ultrasonic Welding	2	2 sets of ultrasonic welding systems with 4-8 welding points as customer’s request
12	Automatic Cutting	1	Roller knife with double sides blade for slitting to cutting the length of sheet according preset program values
13	Output Stacker	1	To collect finished layers with trolley. Trolley will move down step by step when final product arrives.
14	IPC Control	1	Controlled by IPC panel that can also store preset production configurations

## FEATURES

- Semi-automatic Sheet Collating System for High Volumes
- Manual feeding & alignment to reference edges of core layers in sheet format
- Automatic feeding & positioning for overlay film from reel
- Automatic transport & cutting system
- High precision alignment by CCD vision system
- By using ultrasonic system, the result of spot welding is small & perfect
- Easy to adjust welding power , time & depth for different material thickness
- Easy to adjust the welding position for different size material
- Dust elimination device to clean both sides of the collated sheets before welding
- Easy set-up & maintenance
- Output: around 300 sets per hour, depending on material & layout

## KEY TECHNOLOGIES

### CCD Sheet Positioning

The sheet material correction platform adopts visual CCD camera positioning and XYZ correction mechanism to correct the sheet material

### Automatic Stacking

The sheet material will be conveyed to the stacking platform under the precision module and absorbed by vacuum to prevent the sheet material from shifting

### Ultrasonic Welding

2 sets of ultrasonic welding systems with 4-8 welding points as customer's request

### Automatic Correction

The line tracking method will be used to monitor whether the sheet is offline or not to achieve automatic correction function

### Automatic Cutting

Roller knife with double sides blade for slitting to cutting the length of sheet according preset program values, the rest of waste cutting is about 2mm

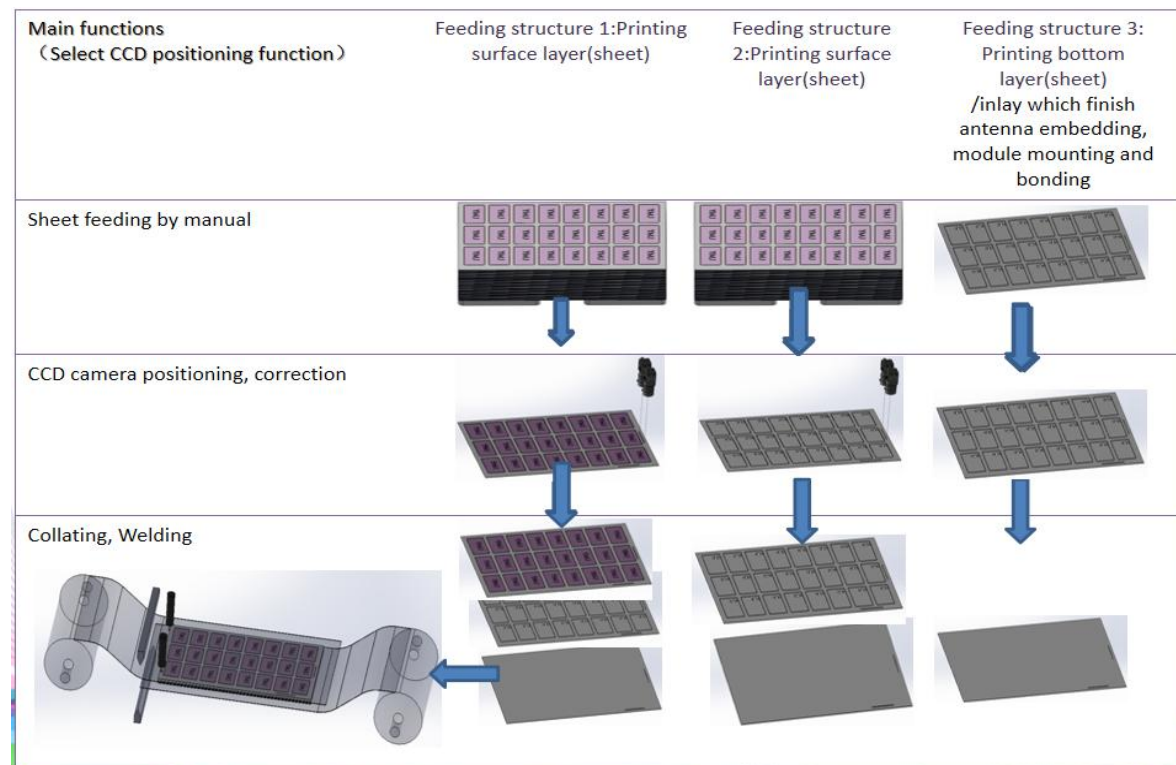
### Dust-elimination System

Dust elimination device to clean both sides of the collated sheets before welding

### Thickness Detection

Probe Detection to detect thickness of sheet to avoid wrong quantity during sheet loading , thickness precision can reach 1 um

## TECHNICAL PROCESS



## TECHNICAL PARAMETER

Model	LUK-ASC3000
Suitable Material	PVC, ABS, PET, PETG, etc. ; Overlay film with glue or without glue
Available Layout	6x8 layout or 2 (3x8)
Available Material Thickness	PVC : 0.07mm-0.40mm Inlay:0.05mm-1.5mm Overlay Film: 0.04mm-0.15mm Thickness after Spot Welding: 0.40mm-1.2mm
Positioning Method	OCR
Accuracy	±0.15mm
Welding Depth	0.20-1.0mm
Output	Around 300 sets per hour( 2 films+ 3 pvc core)
Air Source	0.6 Mpa
Power Supply	220V, 50-60Hz, 5 KW
Safety Device	Equipped with 5 groups of operation bottoms with pause, initialization, start, and emergency stop bottom and safety switch.
Operator	One person