堅·持·最·高·品·質·承·諾

ATMAGP 20PPS

Single CCD Center Registering Screen Printer for Cover Lens




產品形象
銀質獎


台灣精品
成就獎


創新研究獎


國家磐石獎


國家品質獎


通過ISO9001
ISO14001


小巨人獎


歐洲安全規格
認證通過

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APPLICATION :

Specialized in automatic center registering for high precision printing on cover lens without fiducial mark.

CHARACTERISTIC :

Machine Structure

- **Affluent Operation :** Consisted of registering + printing section, use sliding table connecting front / back to transport substrate with manual off-loading.
- **Environmental Energy Saving :** Electrical structure, extreme low air pressure exhaustion, air compressor 1/2 HP driven to save energy in long term to convert into cost saving 30%.
- **Oil Free Moisture Filter Unit :** Oil free filter does not generate oil mist contamination phenomenon, suitable use in clean room.

Up Down Structure

- **Precise Positioning :** Motorized screen up down, German gear motor is used to match with precise high leading screw rod and encoder, digitalized analogue control, screen up down fast stable and silence to attain precise positioning ±0.05 mm

Sliding Table Structure

- **Servo Driven :** Servo motor + timing belt is adopted to drive shuttle table movement to transport fast and stable.
- **Vacuum Suction :** Coordinate with silent vacuum to suck air positioning. Assure substrate not displacement while sliding table moving and printing.
- **Concise Design :** Printing table is equipped with one piece pneumatic pop-up pin.

Registration Platform Structure

- **Strengthened Treatment :** Aluminum alloyed table top lamination with thickness 12mm which was treated by hardness anodized to prevent scratching.
- **Customized Design :** Customized table top, depending upon substrate size to open slots for zero off-contact height printing and fast loading and positioning.
- **Quick Registration :** Software for registration system matches with IPC able to set parameters to attain fast movement and positioning.
- **Visual Registration :** Adopts 3 sets of servo motor to control X/Y/θ three axis direction, use visual system to identify displacement volume of automatic control table. High precise transmission structure, fully automatic micro adjustment to registering, repeatability registering accuracy attains ±5μm, registering speed (including searching target, registering, inspection) ＜1.5 second / pc.

Printing Carriage Structure

- **Stable Speed Movement :** Servo motor driven printing stroke to match with linear guide rail to drive stable speed for precise printing positioning.

⊙ **Facilitated Adjustment :** Squeegee / flood coater can be adjusted leveling and skew angle, and enable to regulate pneumatic up down pressing depth.

Frame Structure

- **Sensitive Detector :** Enclosed with printing stroke automatic detection sensor, printing stroke distance is set improperly, it may not impact screen frame and frame holder module.

⊙ **Simply Adjustment :** Strong frame holder structure to match with design of standardized frame size, frame holding arm can be adjusted quickly.

- **Fast loading / off-loading :** Equipped with pneumatic frame holder, three pieces activated frame positioning knob to speed up frame loading / off-loading and positioning process.

⊙ **Peel-off Device :** Equipped with peel-off function to avoid sticky after printing to assure printing quality.

Control System

- **Digitalized Control :** 5.7 inch colored touch-screen, exquisite setting versatile operation function, enable to save and retrieve quickly to raise efficiency of production digitalized management, efficiently control stable quality.

⊙ **Quick Save :** Immediate positioning data, enable to save onto machine’ s flash ram or internet media.

⊙ **Language Selection :** Including Chinese / English interface (language file can be switched)

⊙ **Protective Cover :** Protective cover shield is added onto touch-screen to prevent human error breakage.

Visual Registering System

- **Visual Automatic Registering :** IPC + Window advanced program to drive three axis servo registering system, automatic registering fast and accuracy.

⊙ **High Resolution :** Utilized CCD optical magnification to enlarge image of fiducial mark, analysis, comparison to attain high resolution.

⊙ **CCD Device：** Equipped with single CCD camera to detect whole registering area, camera apart from table top 17.5 mm height.

Safety Protection

⊙ **Error Display :** When control system is malfunction, error message will be displayed onto touch-screen for quick trouble shooting.

⊙ **Emergency Stop Device :** Equipped with E-stop button to stop machine in case of emergency.

⊙ **Protective Device :** Raster with adjustable angle can be equipped at sliding table’s front side.

Specification：

	Item	Specification	ATMAGP 20PPS
General Specification	1	Machine size	1245(D)x1050(W)x1680(H)mm
	2	Machine weight	405kgs
	3	Working table height	1000±20mm
	4	Substrate thickness	0.3～2.0mm/0.2kg
	5	Max. Printing size	35x35mm
	6	Min. Printing size	Unlimited
	7	Max. productivity	360 P/H
	8	Air pressure source	5～7kg/cm^2
	9	Air exhaustion	4.2L/cycle
	10	Power consumption	2kw/3.7A
	11	Power source	3 § ，220/380V，50/60Hz
Screen up down Structure	12	Screen up & down	Reducer motor + High lead screw rod
	13	Screen at stand-by height	20mm
	14	Screen up height	400mm
	15	Repeatability accuracy of screen up & down	±0.05mm
	16	Screen up & down speed	200mm/sec
	17	Delay off-contact	0～10sec
Printing Transmission Structure	18	Standard printing speed	55～550mm/sec
	19	Printing stroke	325mm
	20	Guide rail and table parallel	<0.1mm
	21	Delay printing	0～9.9sec
	22	Delay flood coater	0～9.9sec

	Item	Specification	ATMAGP 20PPS
Screen & frame holder Structure	23	Max frame O/D size	400x600mm
	24	Min frame O/D size	350x500mm
	25	Screen frame thickness range	20～30mm
	26	Frame locking	4 pcs cylinder locking
	27	Screen cleaning height	400mm
	28	Peel-off height	20mm
	29	Peel-off mode	Low speed cylinder + inlet & outlet air throttle control
Printing Head Structure	30	Squeegee size	9x30mm
	31	Flood coater mode	Folding at two sides
	32	Printing head swivel angle	0°
	33	Squeegee skew angle	20°±5°
	34	Flood coater skew angle	35°±5°
	35	Adjustable printing depth	7mm
Printing table structure	36	Working table size	350x400mm
	37	Vacuum area	105x150mm
	38	Vacuum mode	Vacuum motor
	39	Vacuum hole diameter	ψ2mm
	40	Take off blowing	Optional
	41	Take off lifting pin	1pc
	42	Alignment table moving range	X、Y：4°/ θ：1.8°
	43	Alignment table driving	Servo motor + ball bearing screw rod
	44	Shuttle table driving	Servo motor + timing belt
	45	Shuttle table back & forth distance	400mm
	46	Shuttle table back & forth speed	1000mm/sec
	47	Shuttle table back & forth registration accuracy	±5 ㎛

	Item	Specification	ATMAGP 20PPS
CCD driving structure	48	CCD camera working distance	176.5mm
	49	CCD FOV (H*V)	220x165mm
	50	CCD image-taking range	50(D)x50(W)～165(D)x220(W)
	51	Alignment light source	Red color
	52	CCD pixel	5,000,000 pixel (2590x1944)
	53	CCD quantity	Single
	54	Image integrated accuracy	By target±0.005mm/centered±0.02mm
	55	Integrated accuracy	By target±0.01mm/centered ±0.03mm
Control system	56	HMI	5.7 inch
	57	Memory group	100 groups
	58	Screen space	0～30mm
	59	Printing number setting	1～5 times
	60	Productivity display	0～99999999
	61	Pe-productivity display	0～99999999
	62	Error message	Error message display
	63	Error memory	100 groups
	64	Screen up & down stepping function	Standard
Safety structure	65	Emergency stop button	Optional
	66	Auto malfunction diagnosis dispaly	Optional
	67	Adjustable angle safety bar	Optional

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Machine size drawing：

