堅·持·最·高·品·質·承·諾

# ATMATIC 70PD/W

## Automatic Glass Panel Screen Printer (Walking Beam)




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 screen printing automotive glass (regular or irregular shape) such as side window, skylight, etc. full automatic processing.

## CHARACTERISTIC :

### Framework

⊙ Solid structure : Adopt high strength extruded steel structure with welded connection

⊙ High accuracy : The assembly joint datum is machined even precisely.

● Optimum anti-rust : Metal surface treatment + static powder coating or anodized traetment

### Inlet / Outlet Structure

⊙ Inlet / outlet mode : Adopt Aluminum wheel + O ring + NBR for inlet / outlet conveyor structure.

⊙ Roller transmission：Servo motor + gear reducer + chain with wheel transmission.

● Reflective sensor : Equipped at machine front / back side to examine inlet / outlet exchange

⊙ Inlet / outlet detection：Sensor is added at inlet / outlet conveyor.

### Correcting Structure

● Distinct light / heavy pressure : Four ways correcting cylinder, three sides can be adjusted light pressure, another side is adjusted heavy pressure, settable four ways synchronous correction, also settable sequence of correcting.

⊙ Adjusting mode ：By use manual adjusting + T-shaped groove + rule, front back / right left synchronous adjustment to correct position

⊙ Correcting range：Minimum 100x150mm, maximum 600x700mm, wide range of correcting fro convenient processing

### Walking Beam Structure

⊙ Bi-working three station：Walking beam transport structure adopts bi-working three station for rapid delivery and position, instantly continues next action to raise productivity.

⊙ Air bolt switch : Walking beam air bolt switch can be turned off when suction the glass is no need.

● Prevent rubbing：Glass will slip when inlet correcting, glass weight and rubbing on suction cup to extend lift time

## Up Down Structure

⊙ Up down stable：Adopt servo motor to collocate with hollow-shaft reducer to match advanced high leading screw rod transmission, fast motion and precise positioning.

● Accurate registration：Rapid up down structure, precise registration, up down repeatability accuracy within ±0.02mm

## Vertical Section Structure

⊙ Stable printing speed： Printing stroke adopts servo motor + hollow shaft reducer for fast movement and precise positioning, printing stroke and speed can be set digitally.

⊙ Aluminum extrusion module：Molding Aluminum alloyed structure for high strength with light weight, durable and high precision to support extreme force.

## Printing Transmission Structure

● Servo motor + reducer：Solid printing torque, full digital control and full stroke extreme stable motion.

⊙ Delay printing：After squeegee / flood coater pressing down to start delay time 0~9.9 seconds (digital control), ensure printing pressure completely present in prior to start printing.

⊙ Angle adjustment：New design printing head integrates multi-adjustment structure for squeegee / flood coater angle/ depth/ printing pressure etc.

● Convenient screen cleaning：Equipped pinting head up down cylinder to facilitate squeegee / flood coater / screen exchange and cleaning ink

## Screen Frame Structure

⊙ Frame air locking：Screen frame adjusting easy and fast, stencil, right / left frame holder, frame carrier are locked pneumatically

⊙ Peel-off function：Attached with low speed cylinder for peel-off, peel-off height / speed can be adjustable to avoid sticky mesh after printing.

## Printing head Structure

● Guide rail cylinder：Squeegee / flood coater is driven by guide rail cylinder module, high sensitive printing pressure can be presented completely, digital setting and durable long life time

⊙ Precise adjustment：Enclosed adjustment structure for tooling depth (dial guage), skew angle, swivel angle.

## Printing Table Structure

⊙ Air pressure sensor：Two sets of walking beam and table are equipped air pressure

sensor to examine vacuum value and instant status of substrate on walking beam.

⊙ Magnetic suction：Applied as nesting function while printing irregular shaped glass to achieve perfect printing, also prevent mesh torn-off and squeegee damage.

## Control System

⊙ Touch screen panel : Adopt Japanese grand brand 7" touch panel to facilitate operating.

● Digtial control：Display Chinese / English can be exchanged on touch-screen, digital setting printing parameters, and display error message.

● Standardized management：100 groups of memory module can be named, numbered individually to save and retrieve quickly, facilitate standardized management for every individual different production.

⊙ Printing digital control setting：Digital setting printing / flood coating speed (50 ~ 1070mm/sec)

⊙ Multi-printing cycle mode：Instant flood coating, pre-flood coating, double printing, each cycle mode can be repeated 1~5 times printing, satisfies with different ink layer thickness requirement.

⊙ Error display：When control system is failed, error message is displayed on touch-screen for quick troubleshooting.

## Safety Guarding

⊙ Safety bar is contacted abnormally when descending, machine stops immediately.

⊙ Lateral front of inlet section and operating section are equipped with two sets of emergency stop switch.

⊙ Front section of machine is equipped one set of safety raster (option), rear section lateral right / left are equipped with one set of safety raster (option).

⊙ Programmed auto-chain locking protection when erroneous action.

● Equipped with three color warning lamp to indicate definitely identified operating status at spot

## SPECIFICATION :

| | Item | Descriptions | ATMATIC 70PD/W |
|---|---|---|---|
| Machine Specification | 1 | Machine dimension | W3440*W1320*H1900mm |
| | 2 | Machine weight | 1,415kg |
| | 3 | Productivity (full stroke full speed) | 800P/H |
| | 4 | Substrate weight | <7kg |
| | 5 | Substrate thickness | 2～6mm |
| | 6 | Air pressure source | 5～7kg/cm$^2$ |
| | 7 | Air exhaustion | 118L/Min |
| | 8 | Power source | 3 ∮ ,220/380V,50/60Hz |
| | 9 | Power consumption | 4.6kw/8.75A |
| Up Down Structure | 10 | Screen up down mode | Ball screw rod + hollow shaft reducer |
| | 11 | Screen stand-by level | 60mm |
| | 12 | Screen cleaning level | 270mm |
| | 13 | Screen up down speed | 250mm/sec |
| | 14 | Screen up down positioning repeatability accuracy | ±0.02mm |
| Printing Transmission Structure | 15 | Max printing area | 600x700mm |
| | 16 | Min printing area | 100X150mm |
| | 17 | Printing head transmission mode | Servo motor + planet gear + timing belt |
| | 18 | Effective printing stroke | 0～760mm |
| | 19 | Printing speed | 50～980mm |
| Frame Carrier Structure | 20 | Max frame O/D size | 850*1200mm |
| | 21 | Min frame O/D size | 550x650mm |
| | 22 | Frame height | 25～45mm |
| | 23 | Screen micro-adjustment X/Y/Y | ±10/±10/±10 |
| | 24 | Screen registration driven mode | Manual +precision screw rod +position indicator |
| | 25 | Frame fixation / frame holder locking | Pneumatic cylinder locking |
| | 26 | Peel-off driving mode | Low speed cylinder |
| | 27 | Peel-off height | 0～20mm |

| | Item | Descriptions | ATMATIC 70PD/W |
|---|---|---|---|
| Print Head Structure | 28 | Print head swivel angle | ±7° |
| | 29 | Squeegee skew angle | 20±15 ° |
| | 30 | Flood coater skew angle | 45±0 ° -15 ° |
| | 31 | Squeegee pressure | 5～58kg |
| | 32 | Flood coater pressure | 5～58kg |
| | 33 | Cylinder stroke for squeegee / flood coater | 20mm |
| | 34 | Adjustable squeegee pressing depth | 10mm |
| Printing Table Structure | 35 | Table size | 900x1000mm |
| | 36 | Table height | 950+30mm |
| | 37 | Vacuum area | 540x660mm |
| | 38 | Vacuum hole diameter | ψ2.0mm |
| | 3 | Vacuum table control mode | Ring blower / exchange valve |
| | 40 | Nesting bar fixation mode | Magnetic suction |
| Walking Beam Transport Structure | 41 | Walking beam driving mode | Servo motor +Linear guide rail +Timing belt |
| | 42 | Walking beam reciprocating distance | 1200mm |
| | 43 | Walking beam max speed | 1800mm/s |
| | 44 | Walking beam up down driven mode | Guide rail cylinder ψ20x60mm |
| | 45 | Vacuum suction cup | Diameter 15mm/ material NBR rubber |
| | 46 | Left right way correcting driven mode | Guide rail cylinder ψ12x20mm |
| | 47 | Correcting pin adjustment mode | Manual adjustment +T-slot +rule |
| | 48 | Correcting pin size | ψ25mm |

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|---|---|---|---|
| Inlet Correcting Structure | 49 | Inlet correcting driven mode | Guide rail cylinder |
| | 50 | Inlet correcting minimum size | 70mm |
| | 51 | Inlet correcting maximum size | 600mm |
| | 52 | Correcting mode | Edge alignment |
| | 53 | Cylinder for heavy pressure side | ψ16x50mm |
| | 54 | Cylinder for light pressure side | ψ12x50mm |
| | 55 | Correcting bar adjusting mode | Manual adjustment +T-slot +rule |
| | 56 | Substrate corrected repeatability accuracy | ±0.05mm |
| Inlet Conveyor Structure | 57 | Conveyor roller height | 956+30mm |
| | 58 | Roller transmission mode | Servo motor + reducer + chain + wheel |
| | 59 | Conveyor roller outer diameter | ψ33mm |
| | 60 | Roller material | 鋁製輪圈+O 型環+NBR |
| | 61 | Inlet conveyor stroke | 850mm |
| | 62 | Conveyor speed range | 50～450mm |
| Outlet Conveyor Structure | 63 | Conveyor roller height | 956+30mm |
| | 64 | Roller transmission mode | Servo motor +reducer +chain + wheel |
| | 65 | Conveyor roller outer diameter | ψ33mm |
| | 66 | Roller material | Aluminum wheel + O-ring +NBR |
| | 67 | Inlet conveyor stroke | 850mm |
| | 68 | Conveyor speed range | 50～450mm |
| Safety Device | 69 | Safety bar | 1 set |
| | 70 | Operator side E-stop switch | 2 pcs |
| | 71 | Raster switch | total three sets (option) |
| | 72 | LED three color warning lamp | 1 set |

## Three view diagram :

