

WID8000

Barcode Printing & Labelling System



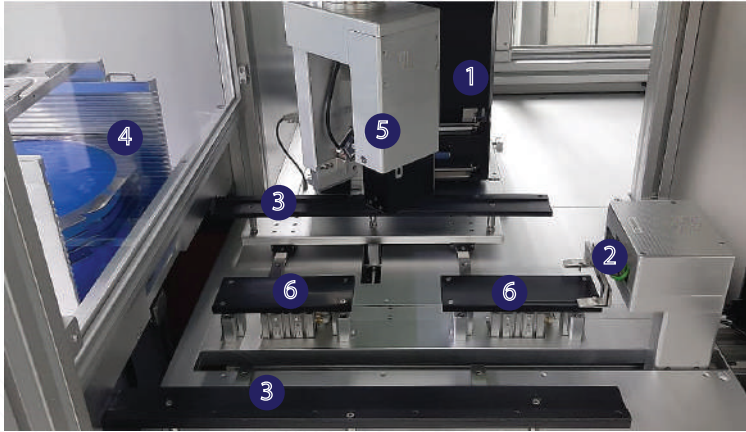
Highlights

WID8000 is designed to handle either 6", 8" or 12" wafer size on 12" or 16" frame size. This system comes with auto-conversion system that enables it to handles two sizes of wafer frame. WID8000 have three main features, which are Barcode reader, OCR reader, and Barcode printer. The system uses OCR reader to read Wafer ID and convert it to barcode format. The barcode generated will be printed by the industrial thermal printer on a sticker label. This sticker label is transferred onto the wafer tape by the industrial robot arm. WID8000 system designed to replace labor force and reduce occurrence of human error during the process of placing the sticker label (Wafer ID) onto the frame wafers.

Key Features

- 1x Load Port to Handle Metal Cassette (12" & 16" Frame Size)
- Frame Wafer Presence & Protrusion Detection
- Gripper with Jam Detection
- Auto Conversion Guide Rail with Alignment Sensor
- Barcode Scanner & OCR Reader
- Industrial Thermal Label Printer
- Selectable Sticker Label Position
- Selectable OCR Reading Position
- RFID Reader for Metal Cassette ID

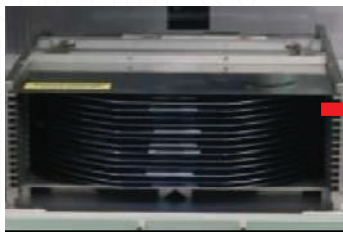
Barcode Printing & Labelling System



- 1** Barcode Printer
To print barcode label based on read wafer ID.
- 2** Gripper Module
To load/unload frame wafer from metal cassette.
- 3** Auto Conversion Rail
Recipe based control for 12" and 16" frame wafer
- 4** Load Port
Designed to handle metal cassette. Equipped with cassette presence sensor, frame wafer protrusion sensor and mapping sensor.
- 5** Programmable OCR Reader and Barcode Scanner
Configurable OCR reading position for wafer ID, up to 8 different positions.
- 6** Center Rail
To support at the bottom center of frame wafer during labelling process.

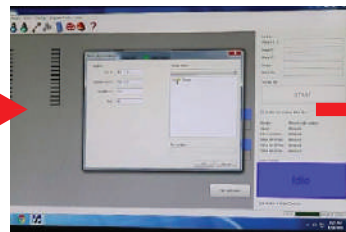
System Capabilities

Operation Process Flow



Cassette Placement

Place the cassette into the Load Port Elevator Module.



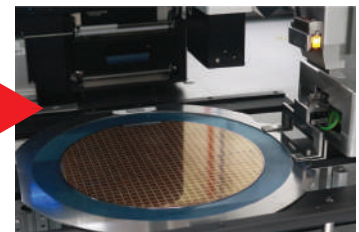
Recipe Selection

Key-in Lot ID and select recipe accordingly.



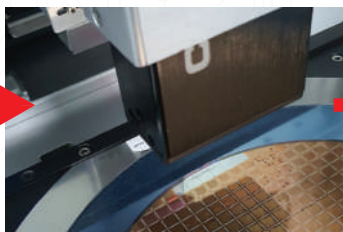
Wafer Frame Mapping

Mapping process for wafer frame presence detection.



Load Wafer Frame

Gripper module loads wafer frame.



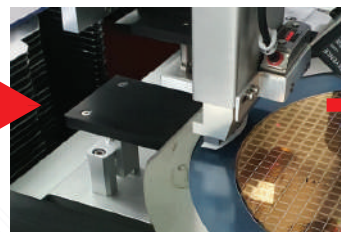
Read Wafer ID

OCR reader read Wafer ID and transfer the data to the barcode printer.



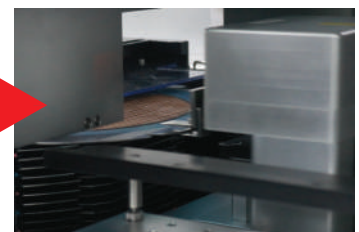
Label Printing

The printer prints out the barcode on the sticker.



Label Placement

Robot arm places sticker label onto tape. Barcode reader scan to confirm.



Unload Wafer Frame

The frame is unloaded to the metal cassettes.

Key Features



Load Port Module

Fool-Proofed Design Load Port

Load port module has fool-proofed design to ensure cassette placement is properly secured on the load port. The load port can be customized to support different cassette type and cassette size. Integrated together with mapping sensor for quick and reliable detection of wafer frame presence and slotting errors in cassettes.



Gripper Module

Effective Frame Wafer Handling

The gripper module with jam detection improves the wafer frame handling during the loading process. This feature enable a secure grip with consistent gripping force on the wafer frame.



OCR & Barcode Scanner

Auto Conversion & Precise Alignment

With the use of auto conversion rail and alignment sensor, the wafer frame can be aligned precisely and quickly throughout the loading and unloading operation. The auto conversion rail can quickly interchange between 12" and 16" wafer frame.



Alignment Sensor

Programmable OCR & Barcode Scanner

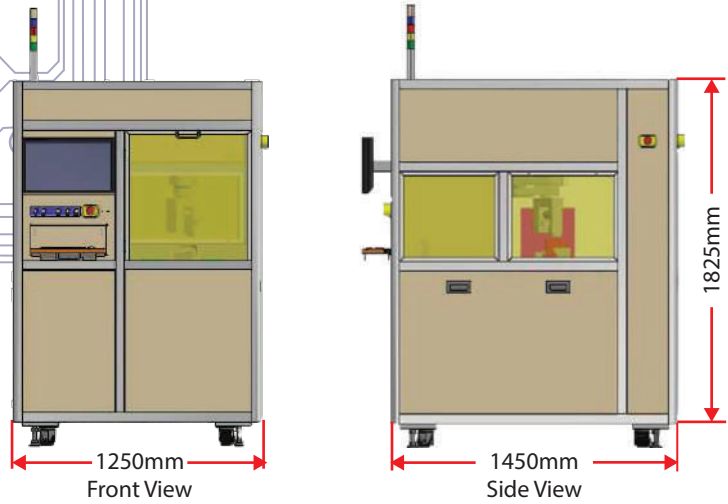
IOSS WID120 and Barcode Scanner can decode OCR, Barcode, Data-Matrix and QR-Code markings on any kinds of wafer, regardless of the wafer material. The user-friendly interface speeds up the process of teaching OCR reading. Up to 8 wafer ID reading position can be configured in the system.



Barcode Printer

Accurate Performance Barcode Printer

The thermal printer integrated with head check features which verify the print head status check before each print. Advanced barcode symbologies and character sets are supported by the thermal printer.



Technical Specification

Wafer	
Wafer Size	6" or 8" Wafer on 12" Frame (Auto Conversion) 12" Wafer on 16" Frame (Auto Conversion)
Loading Port	
Load Port	1 Standard Frame Wafer Load Port
Input Cassette	12" Framed Wafer Metal Cassette Type (for 6" Wafer & 8" Wafer Size Only) OR; 16" Framed Wafer Metal Cassette Type (for 12" Wafer Size Only)
Handling	
Handling Module	Cassette Load Port Elevator
	Gripper for Load/Unload Frame Wafer
	Programmable Barcode Sticker Labelling Module
	Programmable Motorized OCR Reader and Barcode Scanner
Automatic Conversion Function for 12" & 16" Frame	
Label Position Accuracy	
XY-Axis Accuracy	±0.5mm
Theta-Axis Accuracy	±0.1 Degree
Barcode Labelling Printer	
Printing Method	Thermal Transfer
Printer Resolution	203 dpi (8dots/mm), Optional 305 dpi (12dots/mm)
Printer Speed	Min: 2 ips (50mm/s), Max: 8 ips (203mm/s)
Max Print Length	104mm
Max Print Width	2500mm
Label Format	2 Type (Optional to Add up to 10 Max)
Dimension	457mm (D) x 271mm (W) x 321mm (H)
OCR Reader	
Model	IOSS or Cognex OCR Reader
Reading Capability	Standard: SEMI M12, M13, M1.15, SEMI T1.95
	OCR fonts: SEMI FONT (straight, concave and convex), NON SEMI FONTS
	2D codes: ECC200, T7 Data Matrix, QR Code and M1.15
Standard Accessories	
Operating System	Standard Industrial Panel PC with Windows 10
Status Indicator	4-Tier Tower Light with Adjustable Buzzer Volume
Optional Items	
Network Communication	SECS/GEM Interface
Barcode Scanner	Handheld Barcode Scanner
RFID	RFID Reader for Wafer Frame Cassette ID
Operating Environment	
Power System	200-240VAC, 50/60 Hz Single Phase
Room Temperature	20°C- 28°C
Dimension	
Foot Print	1450mm (L) x 1250mm (W) x 1825mm (H)

* The information in this catalogue is correct at the time of printing. QES Mechatronic reserves the right to make design changes or improvements. Specification are subject to changes without prior notice

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