PVA TePla

SAM 300 Auto Wafer Scanning Acoustic Microscope

Semiconductor Systems

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SAM 300 4-channel Auto Wafer Scanning Acoustic Microscope

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SAM 300 4-channel Auto Wafer

Auto Wafer is a product especially developed for the use of "inline" production control. It is corresponding to clean room class 10
The main application is related to bonded wafers (MEMS), detection of voids, inclusions or delaminated areas in bonding interfaces.
The system can be customized according to requirements (e.g. open loadport concept/FOUP's, different kind of barcode readers, bridge tool solutions, different kind of drying solutions – air knife, vacuum drying, spin drying.

Technical Data

Mechanics

Drive:	Linear motion system
Scanning range:	min. 250 x 250 μm max. 430 x 320 mm
max. moving speed:	1,0 m/s
Acceleration:	10 m/s²
Repeatability:	+/- 0,1 μm
Encoderinterface:	15 nm resolution
Z-Drive	5 x Motorised, 100 mm travel range, auto focus (patent application)

Electronics

RF-interface:	4 x 500 MHz
Signal Converter:	4 x A/D interface 500 MSample
Computer control:	5 x High performance PC RAID 1 windows based, Master/Slave concept

Software

Scanning modes:	A-, B-, C-, D-, G-, 3-D, sequence-, auto-, P- (profile) and X-scan (automatic multi-scan up to X images during one scan), HQ-scan, FFT, B-Scan with quantitative measurement, A-scan real time display with time of flight function, Real time 3-D scan, pre-scan and fast pre-scan mode
Functions:	GEM/SECS software interface Three "login levels" (operator, engineer and service) Generates a wafer mapping presenting the defect area Defines a wafer as bad, when a free selectable scrap-limit is exceeded Result will be summarized in the report file Storage of all image data with the defect review parameters

Handling System

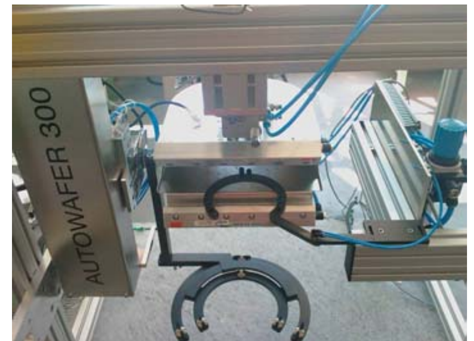
Cassette Load stations:	1 – 3
Foup:	On request and customer specification
Prealigner:	4 – 12 inch
Barcode reader:	2D71D
Wafer chuck:	6 – 12 inch 8 – 12 inch bridge solution
Drying stations:	1 – 2 dryers (air knife)

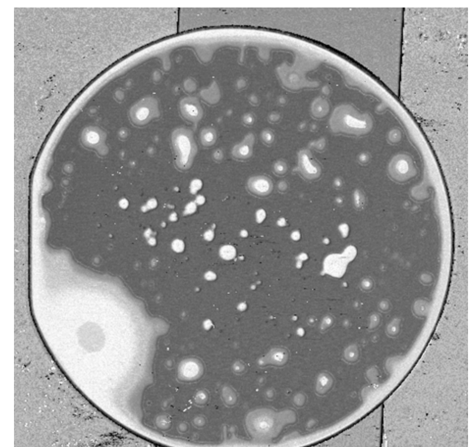
Options

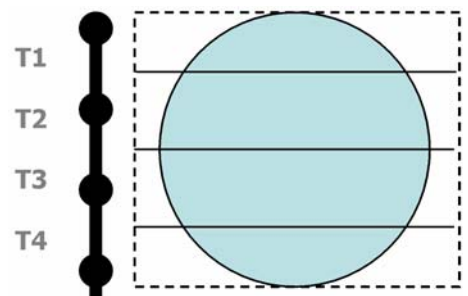
Software:	3D tomography software module, movement, cut and rotation of 3D images Z-scan software module Tray software module PVA TePla image analysis package

Requirements

Environment:	Temperature: 15-30°C; Humidity: < 70%
Utility:	110/220 V, 16A - compressed air necessary Water tank exchange concept: closed loop/open loop







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SAM 300 2-channel Auto Wafer Scanning Acoustic Microscope

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SAM 300 2-channel Auto Wafer

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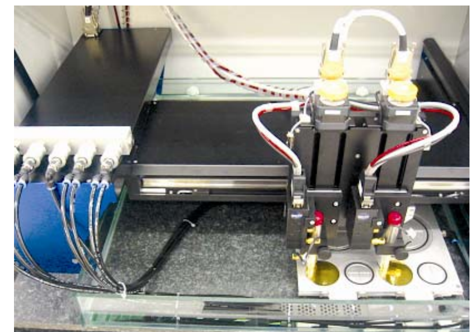
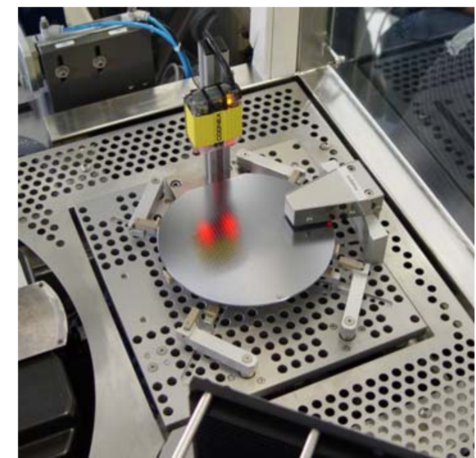


Technical Data

Mechanics

Drive:	Linear motion system
Scanning range:	min. 250 x 250 µm max. 320 x 320 mm
max. moving speed:	1,5 m/s
Acceleration:	10 m/s²
Repeatability:	+/- 0,1 µm
Encoderinterface:	15 nm resolution
Z-Drive	Motorised, 100 mm travel range, auto focus (patent application)



Electronics

RF-interface:	1 x 500 MHz
Signal Converter:	1 x A/D interface 500 MSample
Computer control:	1 x High performance PC RAID 1 windows based

Software

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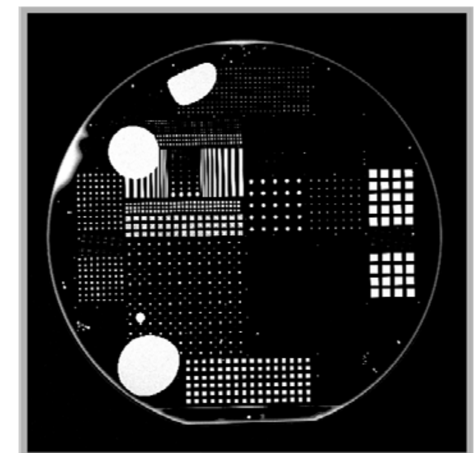

Handling System

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Foup:	On request and customer specification
Prealigner:	4 – 12 inch
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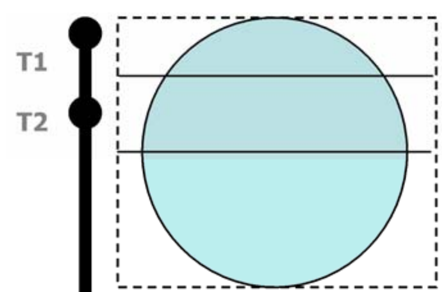

Requirements

Environment:	Temperature: 15-30°C; Humidity: < 70%
Utility:	110/220 V, 16A - compressed air necessary Water tank exchange concept: closed loop/open loop

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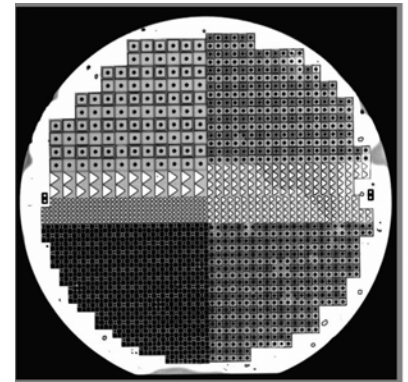

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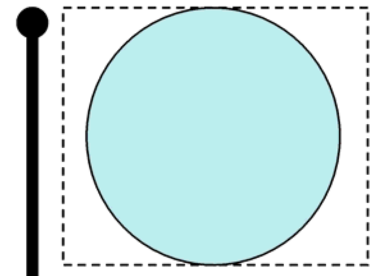

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