

SAM42

SAM 42, is an automatic component handling system capable of processing different components in various sizes as well as dispensing of epoxy. Typical applications are placement -, sorting - and test functions. Its flexibility, along with a variety of options in a compact table top unit allows the usage for standard and advanced packaging technologies like chip on board, multichip module, chip on chip, flip chip and eutectic soldering processes.

Keyfeatures

- free organization of the 16" x 16" working area in pickup and placement areas
- component presentation in all forms, waffle pack and GEL PAK, wafer up to 12" or tape feeder
- open software architecture with various options
- basic system with modular hardware configuration
- flexible system design for customer specific solutions
- easy access to all areas of the machine



Hardware

SAM42

Basics

- presentation area
- cartesian robot XYZ ϕ
- toolmount
- CCD camera

Options

- toolbox
- eject system
- dispenser
- stamping unit
- flip chip unit
- uplooking camera
- feeder bench
- eutectic unit



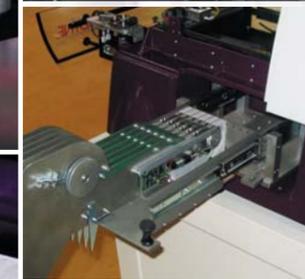
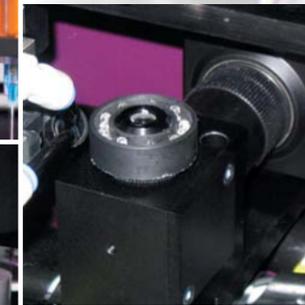
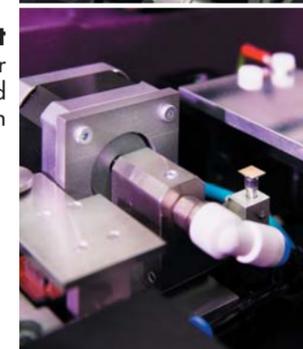
Presentation area
retractable for easy access to
the entire working area

Cartesian robot XYZ ϕ
with integrated touch down
detection, 360° tool rotation,
CCD camera,
ring - , coaxial - and
side light

Toolbox
for 6 or 12 toolholder
positions, automatic
tool change

Eject system
exchangeable, single - and
multineedle capable, in x,y
moveable for fixed wafer
up to 12"

Flip chip unit
programmable rotation for
components from wafer and
other forms of presentation



Dispenser
free moveable writing
time/pressure or rotary
micro valve dispenser with
extensive pattern library

Stamping unit
dual lane squeegee with
selectable speed and
individually adjustable
epoxy film thickness

Uplooking camera
with coaxial - and ring
light for final accuracy
optimization prior to
placement

Feeder bench
up to 10 feeder and tape
width of 8, 12, 16 und 24
mm

Eutectic unit
for substrate sizes up to
25 mm and temperatures
up to 450° C in inert gas
atmosphere



Software

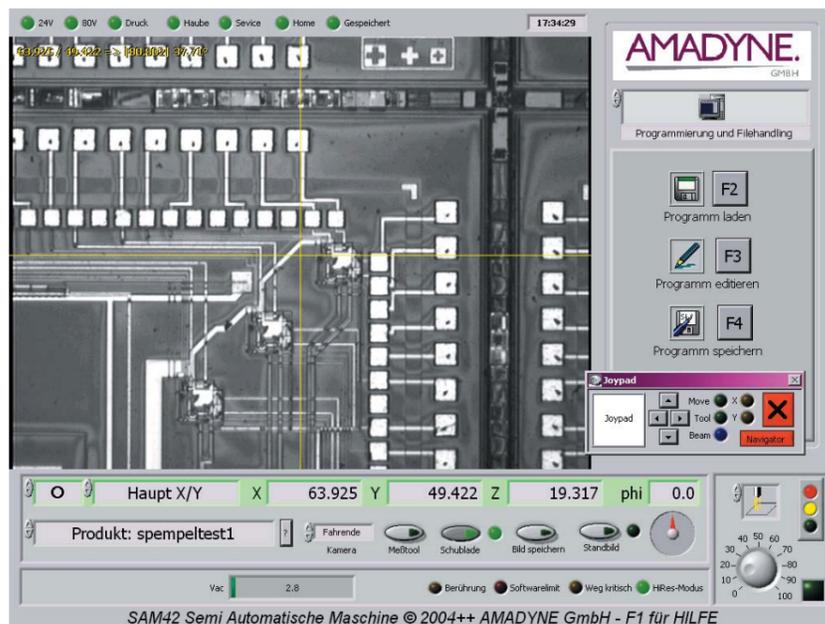
SAM42

Basics

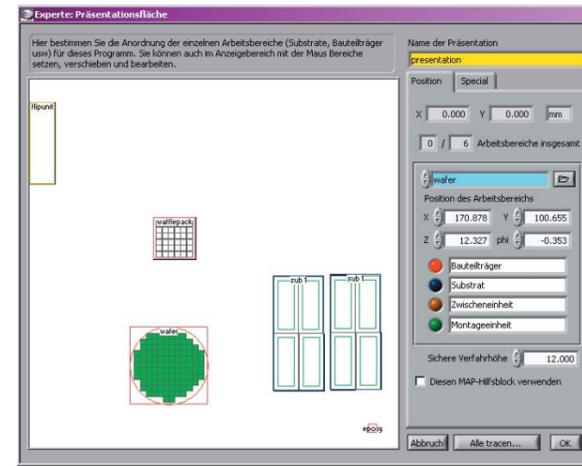
- easy operation
- rapid application programming
- open and expandable architecture

Options

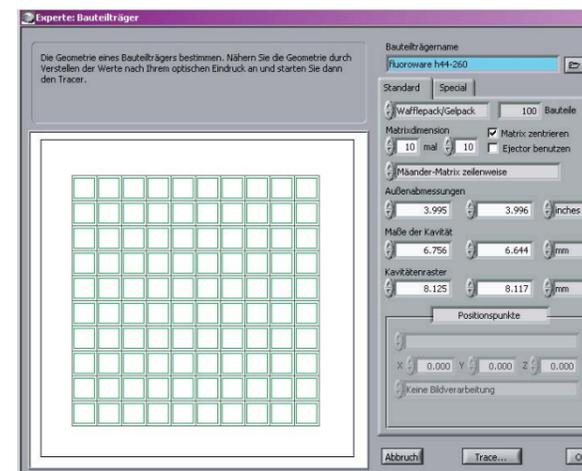
- wafer mapping
- CAD data import
- offline programming
- product simulation
- macro programming language



Basic interface
easy, clear operation with menu window, live video and status window



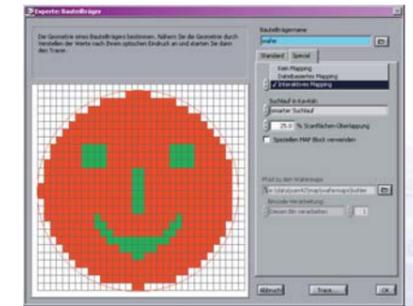
Product presentation
interactive presentation of working area population



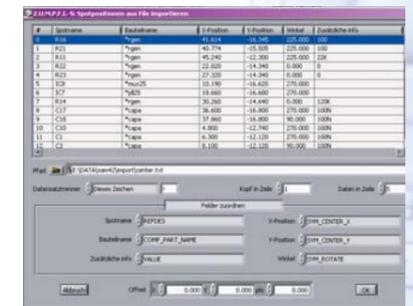
Component carrier programming
interactive graphical programming of the presentation forms with teach in



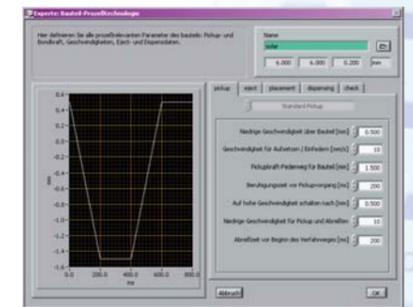
Service menu
operating of actuators, display of sensor states, system diagnosis



Wafer mapping
display of wafer map on the screen, interactive and filebased mapping compliant with SEMI G81-1000



Offline programming
programming of products on external PC and import of CAD positional data



Process technology
easy adjustable process parameters for every component, display of process graph, individual control of component handling



Macro programming language
customer specific solutions in short time