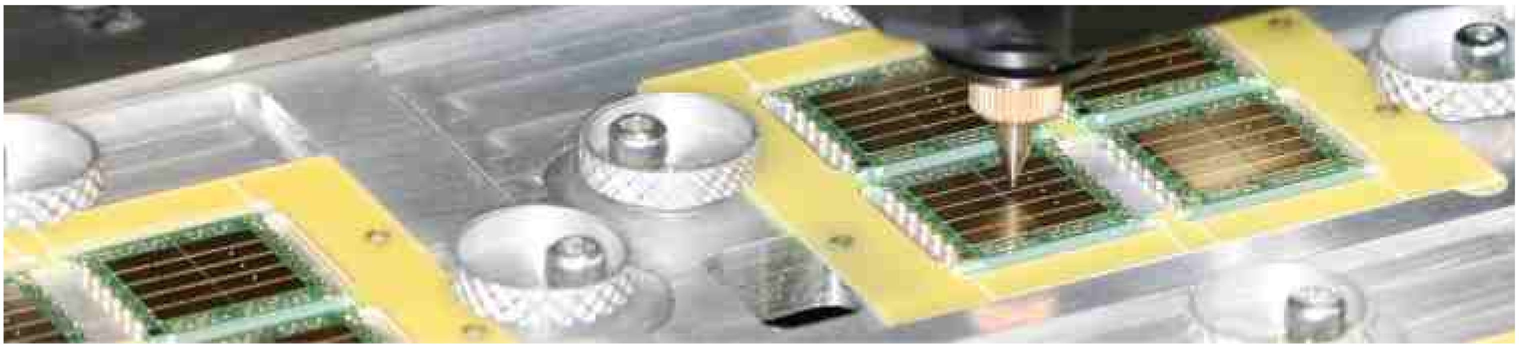

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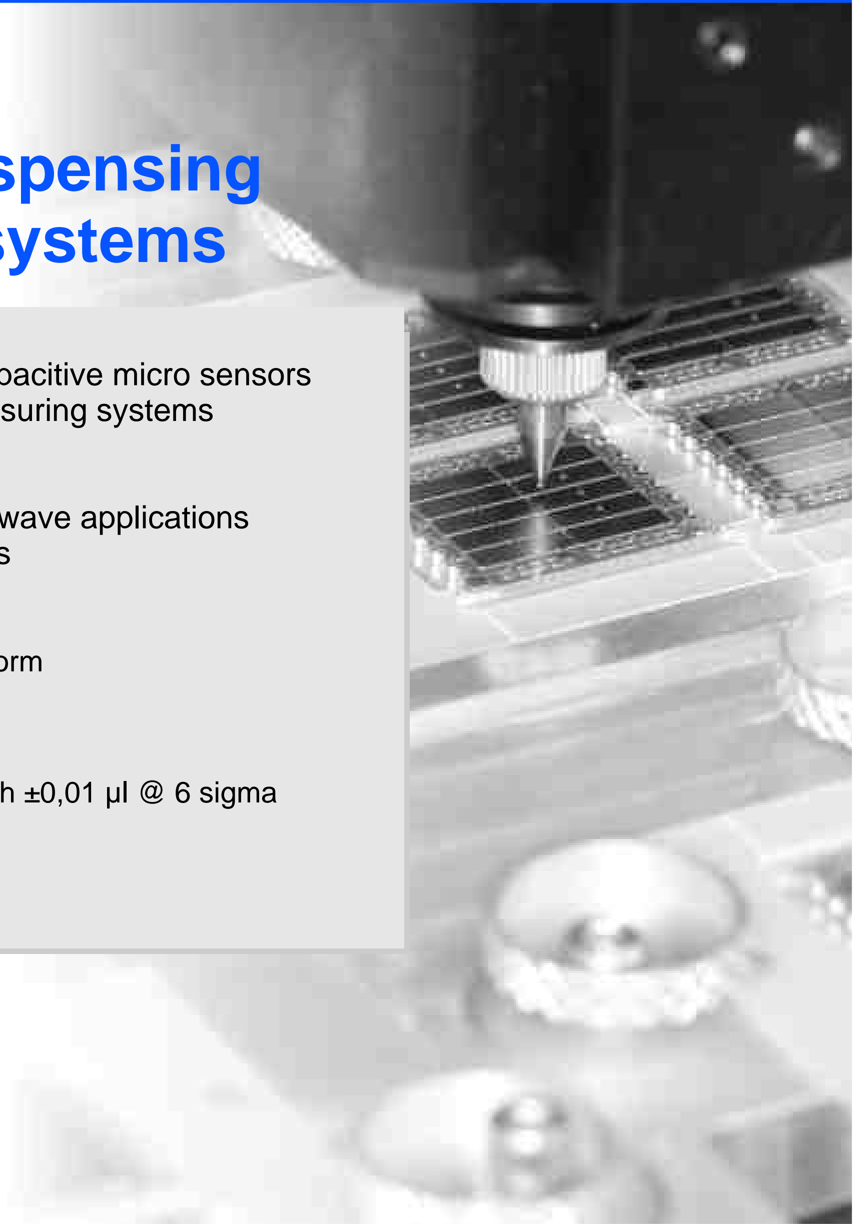
assembling and dispensing of complex micro systems



Multi Chip on Board – inductive and capacitive micro sensors
Flip Chip on Glass – optical length measuring systems
Chip on Flex – weather sensors
3D Multi Chip on MID – sun sensors
Multi Chip & SMD on Ceramic – micro wave applications
MEMS assembly – optical micro sensors

- Die Bonder, Dispenser & AOI on one platform
- Positioning accuracy ±10 µm @ 3 sigma
- 3D micro assembly tilt angle > 90°
- Dispensing dot ±0,1 nl @ 6 sigma
- Volume dispensing and 3D dispensing path ±0,01 µl @ 6 sigma
- Setup time < 5 min
- Machine capability c_{mk} > 2,0
- Availability > 97%

MicroWorld

VICO 520 M - Multi Chip & 3D Micro Assembly Equipment

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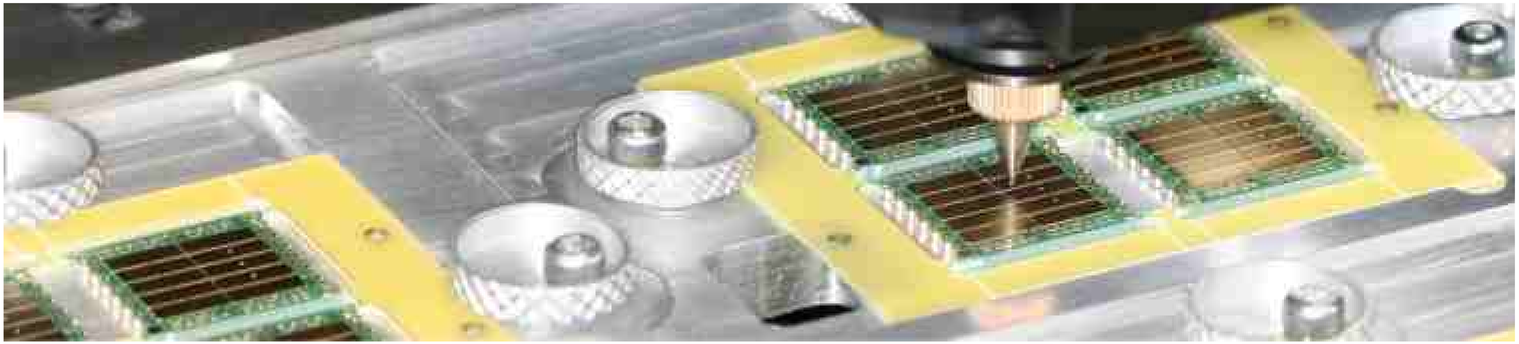

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movement system	precision portal with AC-servo drive and optical linear measurement systems
working area (X,Y,Z)	450 x 480 x 40 mm (depending on configuration)
repeating precision	0.001 mm
placing head	placing head with rotation axis, vacuum tool, changeable force decoupled tools
tool rotation	>360°
axis resolution	±0.008°
touchdown force	analogously adjustable from 0.2 to 60 N
dispenser	one or two dispense heads with automatic volume controlled dosing and filling control
dispense accuracy	±0.01 nl
material storage	3 to 30 ml disposable cartridge
range of viscosity	0.5 to 500.000 mPa·s
dosing force	max. 240 N
vision system	3D-recognition with integrated height measurement
search area (X,Y,Z)	±2.0 mm
rotation area	±180°
measurement resolutions (X,Y,Z)	±0.002 mm
optical controlling	integrated 3D AOI functions for pre- and postinspection
supply of components	standard and special supply of components installable in the whole working area supply from 4 sides
SMD tape feeder	max. 75 x SMD tapes 8 to 44 mm
SMD stick feeder	max. 75 x SMD sticks 6 to 22 mm
waffle pack holders	twofold to eightfold waffle-tray 2 to 4 inch
gel-pak holders	station with vacuum-control for gel-pak 2 to 4 inch
die eject	single wafer or double wafer units for 2 to 8 inch wafer
wafer changer	tenfold and twentyfold wafer changer
additional equipment	universal, vacuum and heating substrate support 3D substrate support with two additional axes SMEMA transport system with automatic width adjustment standard and fine force tool intakes automatic tool changer with tool detection sub side recognition camera ±0.002 mm 3D horizontal recognition camera ±0.001 mm part inspector for part recognition ±0.002 mm flip station with automatic adjustment for different component heights direct dispense station for glueing, pin transfer and fluxing optical 3D measurement of the needle ±0.005 µm automatic cleaning of the dispense needle controlled needle heating process observation camera for monitoring integrated precision scale for weight control and process release network and main computer connection multilingual software under windows
machine specifications	CE-conform
weight	850 to 1000 kg
size (w,d,h)	1450 x 1450 x 1850 mm
power supply	400 V 3LNPE, 50/60 Hz, 3.500 VA
compressed air	≥5 bar, 60 l/min, clean, dry, oil free
operation and environtment conditions	floor carrying capacity > 500 kg/m² floor should be stable and free from vibrations room temperature 20 to 24° C relative humidity < 60%, constant light conditions

Technical Data

contact@haecker-automation.com

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