



**TESTING TECHNOLOGY
AND AUTOMATION FOR
MICROELECTRONICS**

CONTENT

04 ABOUT US

06 TEST MACHINES

08 MCom

09 MCent

10 MCraft

11 MCit

12 LASERTRIMMER

13 FINE-PITCH ADAPTER

14 TEST CENTER FOR PCB

16 AUTOMATION SOLUTIONS
AND ROBOT INTEGRATIONS

18 BRICK / INDUSTRY 4.0



ABOUT US

CUSTOMIZED TEST SYSTEMS FOR MICROELECTRONICS AND AUTOMATION SOLUTIONS FROM A SINGLE SOURCE

Since 1984, we have been manufacturing test systems and fine-pitch adapters for assembled and bare printed circuit boards. In our own test center, we test several million PCBs annually, most of them in the fine-pitch range. Long-term experience as well as the applied synergy from adapter construction, mechanical engineering and test center enables us to meet the highest quality requirements.

We are a second generation family business. Thanks to the continuous development of our products and processes, we are setting new standards and enabling our customers to achieve technological and economic progress.

TEST MACHINES

FLEXIBLE TEST SYSTEMS FOR THE FINEST TEST STRUCTURES

With the microtester and the fine-pitch adapters used on them, you contact the finest test structures. E-tests, functional tests, IC tests or high-current tests are made to be economical, efficient and with a short cycle time. With the integration of HF adapters, we also enable double-sided testing of HF substrates up to high frequency range.

Each machine will be customized according to customer requirements. For example, heating and cooling stations, cleaning processes and marking functions can be integrated. We build microtesters as inline machines or allow you to process substrates from stacks, trays or magazines. According to your needs!

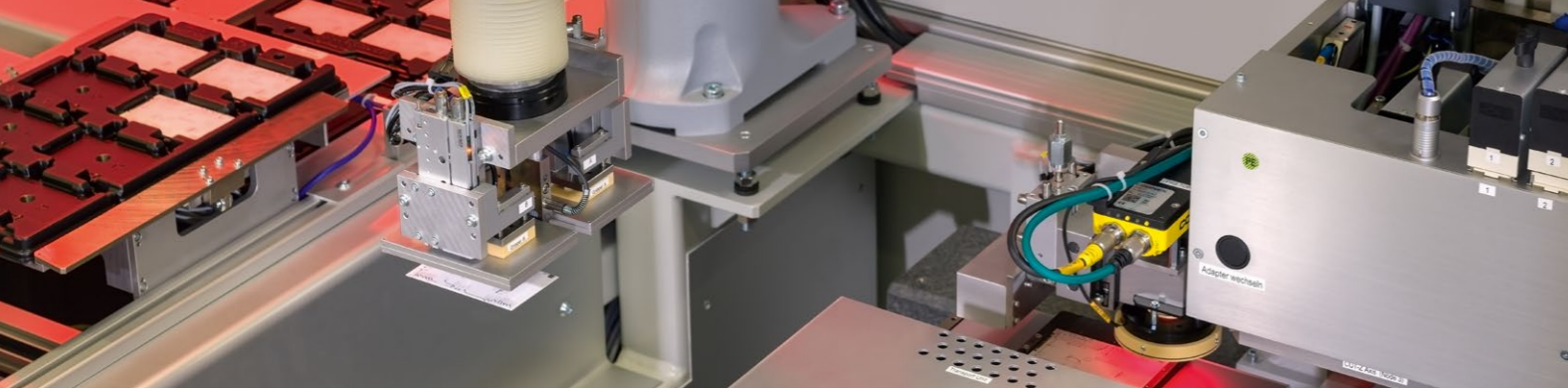
The basic process is the same for all versions. The substrates are optically measured on one or both sides and positioned with the XY system in the contacting. A corresponding offset value is calculated for each contacting side, and the adapters in the X and Y directions as well as in rotation are optimally aligned to the layout.

Traceability is ensured with the unique identification of substrate coding. The measurement results can be directly imported into your MES system and assigned to the corresponding substrate. The digitalisation of your processes is fully supported.



Rapid clamping systems and automatically identified change sets enable quick and safe retooling.

The easy-to-use Brick control system allows you to work more easily and clearly with complex facilities. Even offset values or PRS points of the visual recognition system can be easily adjusted with the finger via the touch surface.



MCom

- Fully automatic microtester for testing assembled and bare substrates.
- Feeding the substrates from stacks, magazines, blisters or inline over conveyor belts.
- Contacting from both sides
- Stepping function of multiple panels



MAIN SPECIFICATIONS

Contact surface:	125 x 125mm
Specimen size:	300 x 210mm
Test point size:	min. 40µm
Test point pitch:	min. 80µm
Size and weight:	w x d x h = min. 1200 x 1200 x 1600mm, from 900kg

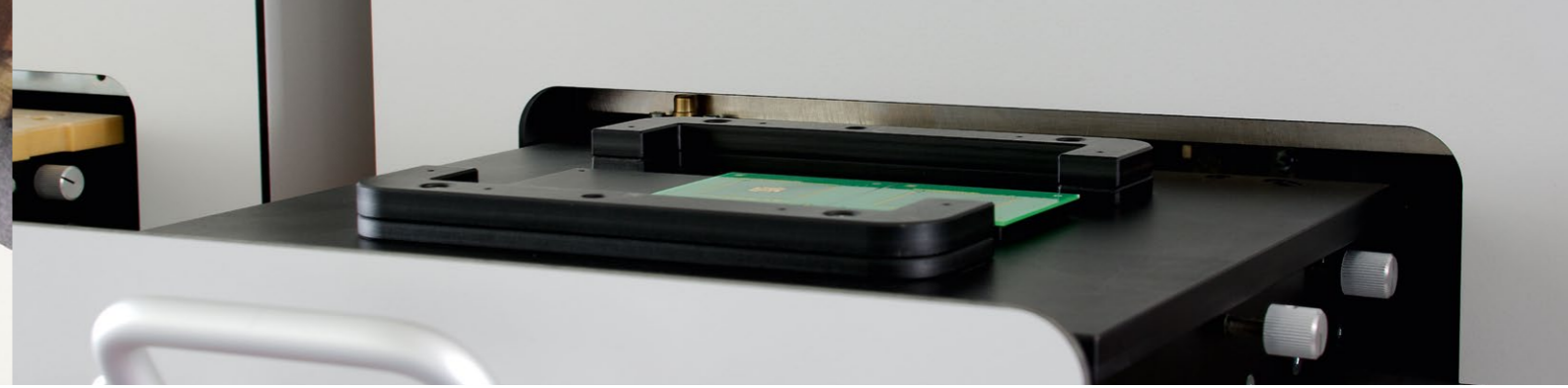
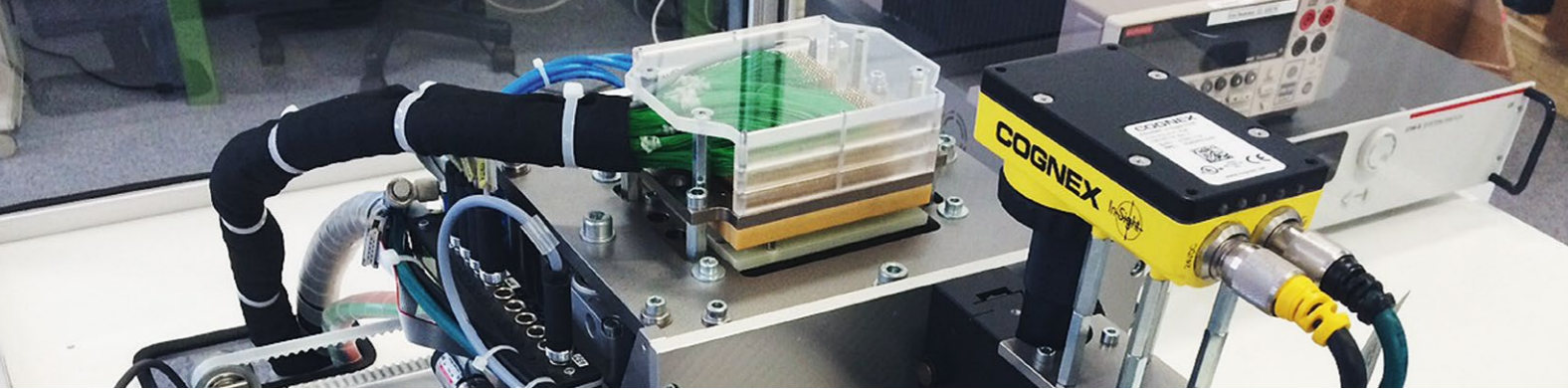
MCent

- Inline microtester for testing assembled and bare substrates
- Supplying of the substrates via an adjustable conveyor belt
- Adapter and camera are mounted directly on the robot arm and contact substrates on one side from above.
- Stepping function of multiple panels



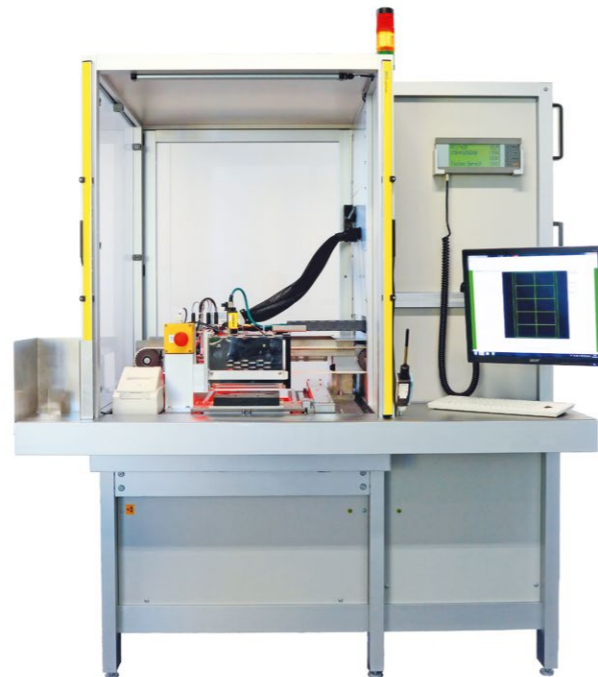
MAIN SPECIFICATIONS

Contact surface:	50 x 50mm, 75 x 75mm, larger possible
Specimen size:	35 x 35mm to 200 x 300mm
Test point size:	min. 200µm
Test point pitch:	min. 250µm
Size and weight:	w x d x h = 700 x 1000 x 2000mm, from 250kg



MCraft

- Semi-automatic microtester for assembled and bare substrates
- Manual feeding of substrates; Correction and contacting are done automatically
- One-side contacting from above
- Stepping function of multiple panels



MAIN SPECIFICATIONS

Contact surface:	125 x 125mm
Specimen size:	max. 200 x 200mm
Test point size:	min. 40µm
Test point pitch:	min. 80µm
Size and weight:	w x d x h = 1500 x 1000 x 1900mm, from 350kg

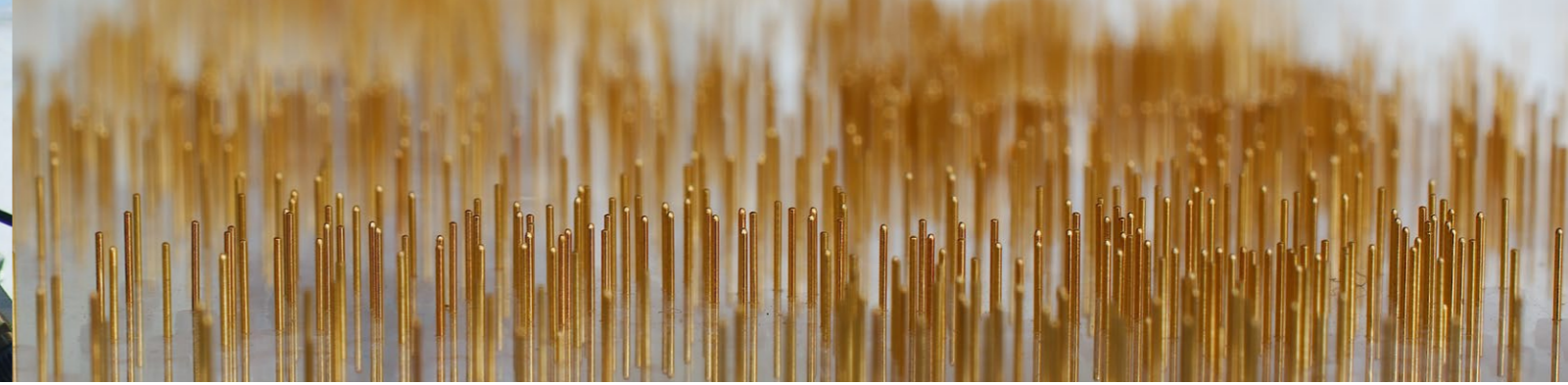
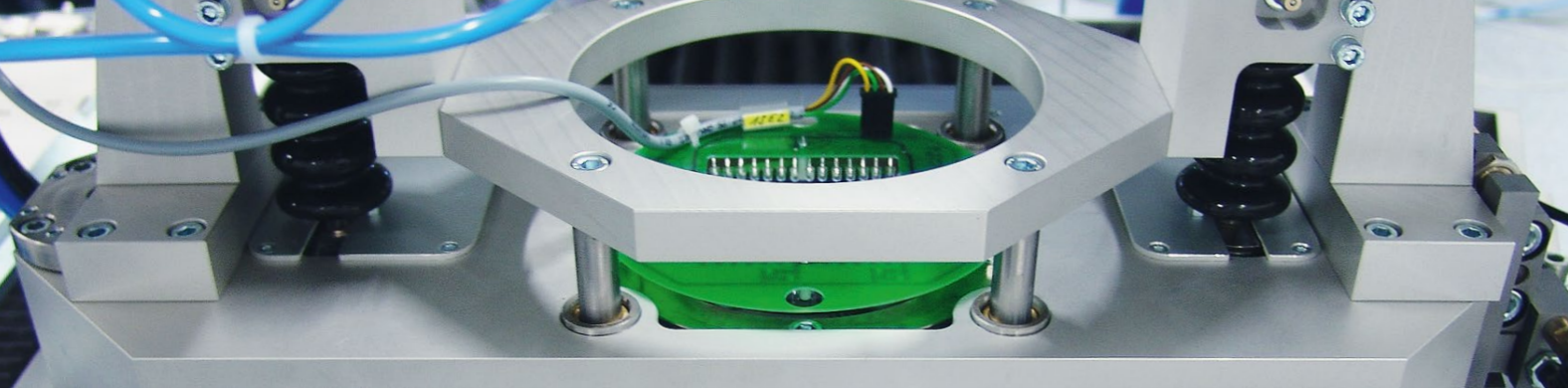
MCit

- Microtester for laboratory use, for debugging of the test programs or as a repair station
- Manual feed, correction in X, Y as well as rotation and test triggering
- Identical adapters can be used on the automatic microtesters



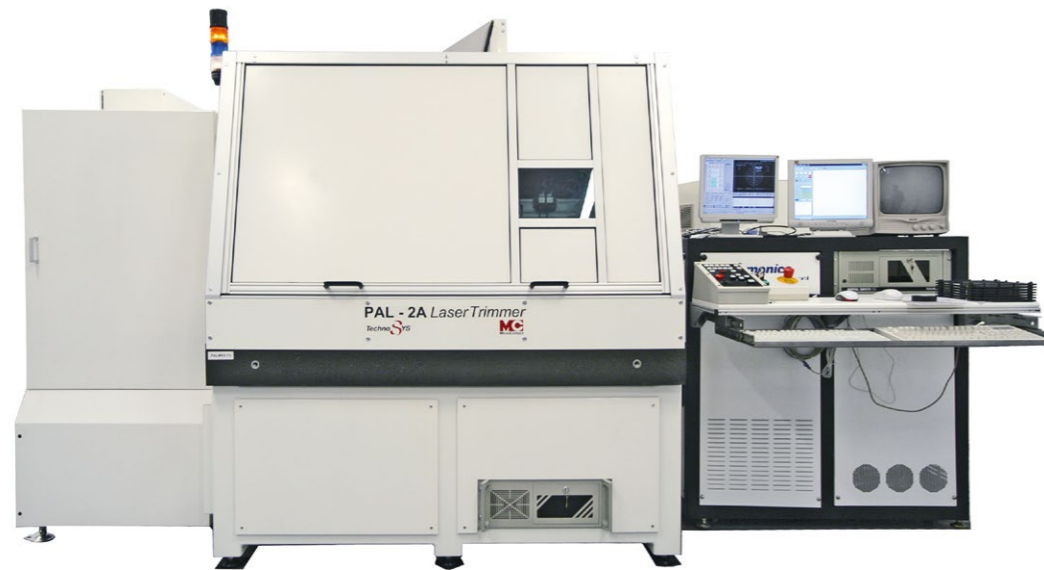
MAIN SPECIFICATIONS

Contact surface:	104 x 104mm (MCit -4) resp. 208 x 208mm (MCit-8)
Specimen size:	max. 104 x 120mm (MCit -4) resp. max. 208 x 220mm (MCit-8)
Test point size:	min. 200µm
Test point pitch:	min. 250µm
Size and weight:	w x d x h = 300 x 420 x 450mm, 17kg (MCit-4) w x d x h = 425 x 460 x 450mm, 35kg (MCit-8)



LASERTRIMMER

Our unique Passive Alignment Laser (PAL) technology allows fast adjustment of all resistors in a single trimming pass, making them much more economical and faster than conventional solutions. The substrate is fixed between clamping bell and adapter. All resistors are simultaneously free for trimming.



MAIN SPECIFICATIONS

Contact surface:	50 x 50mm to 100 x 100mm
Specimen size:	max. 200 x 200mm
Test point size:	min. 150µm
Test point pitch:	min. 200µm
Size and weight:	w x d x h = 3000 x 1900 x 2000mm, 1600kg

FINE-PITCH ADAPTER

THE LEADING TECHNOLOGY IN PRECISION, TEST POINT DENSITY AND QUALITY

Our rigid needle adapters for assembled and bare substrates enable contacting of the finest test structures and test point distances, resulting in optimized layout, greater test density and lower production costs.

Thanks to very long service life and service work carried out autonomously in a short time, only low maintenance costs arise.

In the bare board test, test points with a diameter of 40µm can be contacted with pitch distances of 80µm. Partially, more than 450 test points/cm² can be achieved.

Due to the precise needle guidance and the small lateral play, finest structures can also be tapped on assembled substrates. With the Sirius-adapters, the needles protrude vertically out of the adapter with minimal lateral play, whereby the test points can be realized even smaller and can be contacted even closer to components. Only with the reduction of the test point size from ø0.8mm to ø0.2mm can the required test point area be reduced by 16 times.

	needle protrusion	Ø rigid needle	test point	pitch
PCB	0mm – 0.1mm	0.045mm	0.04mm	0.08mm
PCBA	0mm – 2mm	0.18mm	0.10mm	0.25mm
	2mm – 4mm	0.30mm	0.12mm	0.40mm
	4mm – 6mm	0.30mm	0.15mm	0.40mm

TEST CENTER

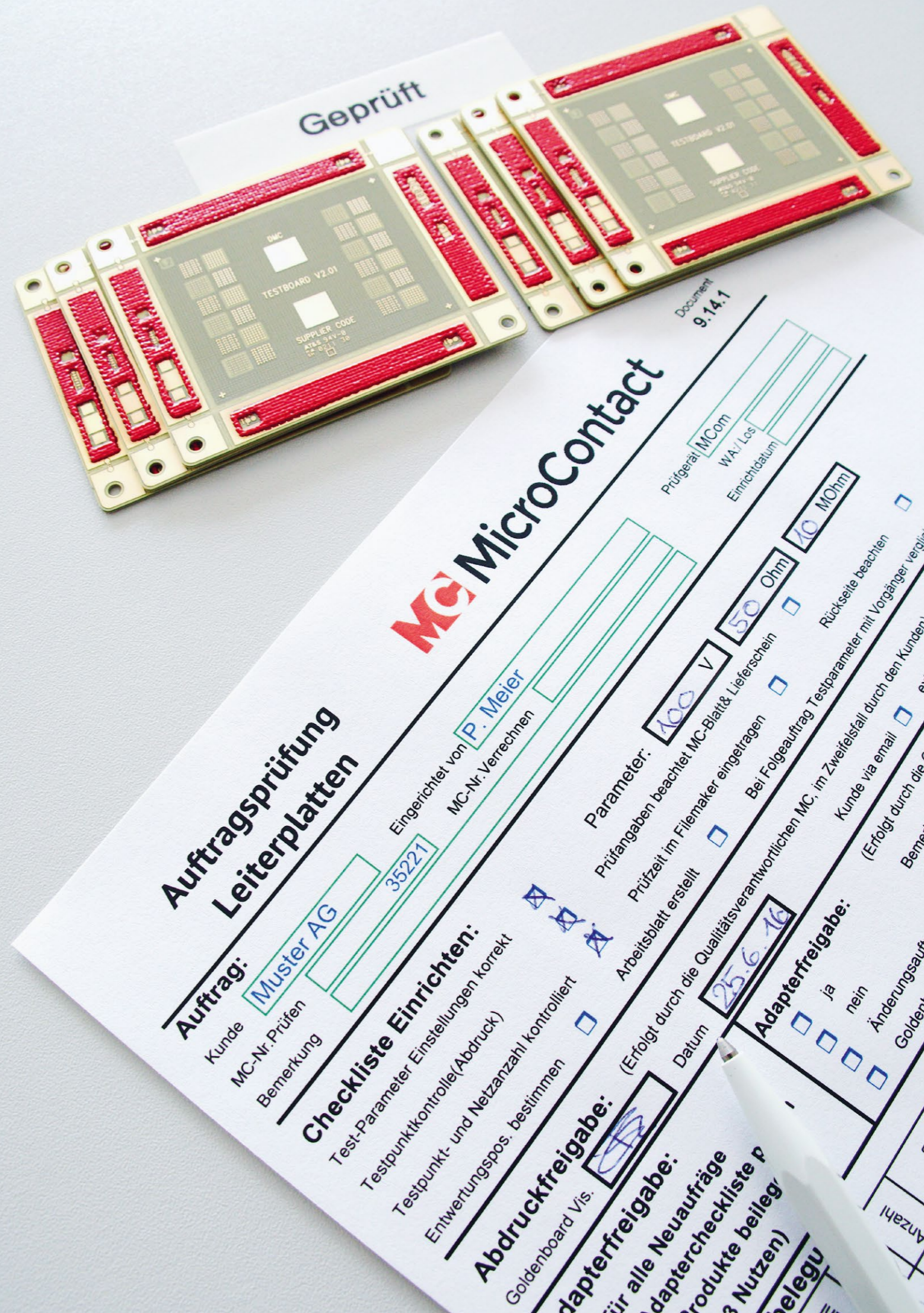
QUALITY INSPECTION AS A SERVICE

With more than 30 years of experience, we are a specialist in the e-test. Millions of circuits are tested annually on several microtesters and flying probes. We process standard orders within 24 hours. The test results are given to our customers in a test report and as an XML file. The test pieces can also be optically devaluated.

WHAT CAN BE TESTED?

PCB thickness	0.05mm - 5mm
PCB size	max. 625mm x 600mm
material	ceramics, flex, semi-Flex, etc..
types of test	open/short test, 4-wire measurement, HF-test, resistance test, hot test until 130°C
voltage	10V - 500V
test current	max. 30mA
open-test	1Ω - 2kΩ
short-test	20kΩ - 10MΩ
HV-test	25V - 500V
isolation	5MΩ - 2GΩ

We would be pleased to provide you with detailed information about our test facilities.





AUTOMATION SOLUTIONS AND ROBOT INTEGRATIONS

**TELL US YOUR CHALLENGE. WE WILL FIND
THE BEST SOLUTION FOR YOU!**

As a general contractor for automation solutions and robot integrations, we offer everything from engineering to machine control, assembly and service from a single source. Because of the construction and the increasing automation of our microtesters, we have continuously built up and further developed our know-how in special machine construction. Today, we are a specialist for robot integrations, the detection and measurement of workpieces by means of a vision system, highly accurate parts handling and efficient machine processes.

Our customer-specific automation facilities are well thought out, simple and intuitive to use as well as qualitatively excellent processed products.

BRICK / INDUSTRY 4.0

THE SIMPLICITY AND FUNCTIONALITY OF THE EVER-EVOLVING MACHINE CONTROL HAS IMPRESSED OUR CUSTOMERS FOR MORE THAN 25 YEARS.

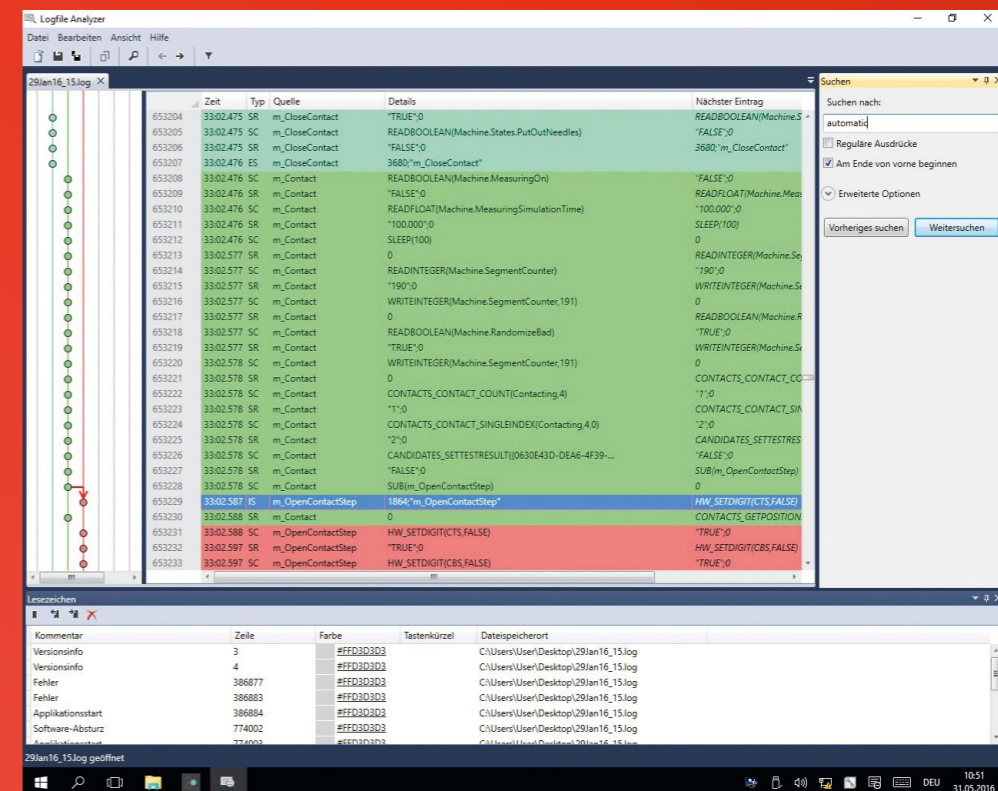
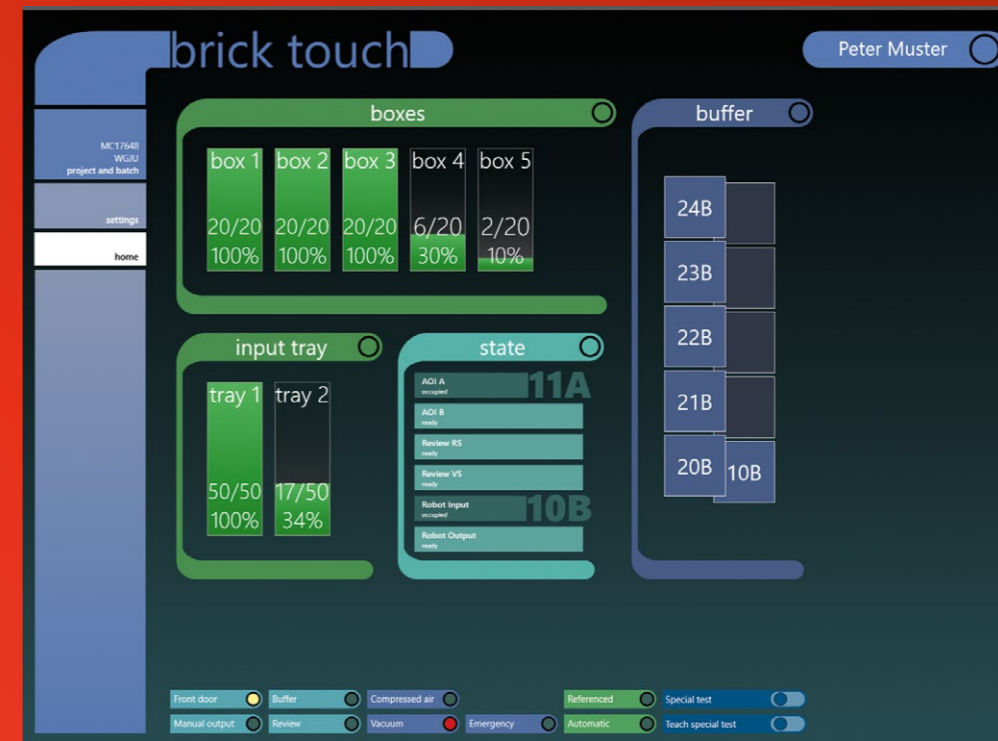
Our PC-based machine control Brick opens the way for you to Industry 4.0 and the digitalisation of your processes. The connection to your ERP- or MES-system has long been a matter of course. As a result, information such as production quantities, process data or test results are available for you in real time.

The brick.touch surface has been designed to be clear and easy to understand. It is no longer necessary to look up the users manual. Logical arrangements of commands and information as well as intuitive operation make it possible for complex machines to be serviced by new personnel in a very short time.

With the log file we receive, according to demand, a complete overview of the system over the past few days and can support our customers easily, cost-effectively and quickly via remote access.

The log file analyzer evaluates the data as well as system states and visualizes the process sequences and their parallels.

The flow-oriented control system simplifies and accelerates the commissioning of complex facilities. Extensions can also be efficiently retrofitted.





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