



## Our services

Your full-service provider for electronics development, type testing and series production

### Electronics development

- from the specification development to the delivery
- of tested components
- Project management
- Hardware development
- Software and firmware development
- Printed circuit board layout / design
- Sample and test equipment construction
- Type testing



### Electronics production | routine testing | mechanics

- ESD-compatible prototype and series production
- Purchasing of components
- Printed circuit board assembly
  - SMD (from 0201 to BE with edge lengths up to 85 mm)
  - leaded BE
 Production capacity: up to 400,000 components per shift  
 Lot sizes: up to 100,000 pieces
- Machine soldering
  - full convection reflow soldering, full tunnel wave soldering, selective soldering
- Unit inspection
  - Automatic optical inspection
  - Electrical function and in-circuit test
  - Boundary Scan, Burn-In, RF Test
  - Flying Probe Test
  - series programming
- Assembly cleaning and protective coating
  - Fully automatic BG cleaning
  - selective painting
  - potting
- Device construction / cable assembly
- Final testing for function and electrical safety
- Mechanical parts production
- Component manufacturing for free-form bodies and front panels
- CNC milled parts up to engraving



## Type testing

Range of services during development and for finished products

- Single and continuous load tests of assemblies, components and parts and parts for function and resistance to environmental influences
- Consulting for the determination of test severity and sequence, test preparation as well as during the entire test process
- Preparation of test reports

Test types

- EMC tests (conducted and radiated)
  - a) Interference emission (EMI)
  - b) immunity to interference (EMS)
- electrical tests, functional, endurance and safety tests,
- network and power supply analysis
- climatic tests (temperature and humidity)
- optical tests
- thermographic tests



## Test systems for validation and manufacturing

(industrial electronics, telecommunications, automotive, solar industry)  
project planning, installation, commissioning and service of complete, customer specific tests

- Adapter construction (mechanical and electronic)
- Integration into different software environments
- Service and support for adapters and test systems



## Equipment list

Solter paste printing

- two DEK Horizon O3i inline solder paste stencil printers
- semi-automatic EKRA E2 screen and stencil printer
- stencil washing machine N29 ECO-N20

SMD – placement

- two high-speed placement lines:
  - a) two SIPLACE D1 and one high-speed placement machine SIPLACE D1S (components from 0201) and
  - b) one SIPLACE D1 (components as of 0201)
- various manual placement stations FRITSCH



Machine soldering

- REHM full convection reflow soldering machines
- full-tunnel soldering system MaxiWave 2340 C (unleaded)
- Wave soldering system SEHO PCS 8140 (leaded)
- Selective soldering system SEHO PowerSelective

Assembly cleaning, surface coating

- Assembly cleaning system Kolb PSB500
- Coating system DIMA HC-200
- Potting system with Giebler 2-K-DOS

Mechanical machining

- HSC milling machine DATRON M7
- HSC milling machine DATRON M10 Pro (5 axes)



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