



The engineer Reinhard Kalfhaus founded the company "SYKO Reinhard Kalfhaus" in Mainhausen, Germany in 1973. In December 2005 the company "SYKO Reinhard Kalfhaus" changed the company's legal form to "SYKO Gesellschaft für Forschung und Entwicklung GmbH & Co. KG". Since the beginning, the company has focused on the development and manufacture of power electronics, power supplies and power converters. Advance in know-how and high quality pushed the company with enormous expansion rates. Even phases of recessive economy could be bridged with turnover increases.

1988 the "SYKO Gesellschaft für Leistungselektronik mbH" was founded. Today the SYKO association share the areas of activities research & development (SYKO Gesellschaft für Forschung und Entwicklung GmbH & Co. KG) and manufacturing & sales (SYKO Gesellschaft für Leistungselektronik mbH). At the moment more than 75 employees are working at the headquarter in Mainhausen. The yearly turnover is approximately 7 million Euros.

After a serious fire destroyed the old company building to the ground in autumn 1989, already in July 1990 the company moved into the present modern office and manufacturing building with a total area of approx. 2600 m<sup>2</sup>. In December 2004 the expansion was continued with the technology-department's (R&D, Test lab, Service) move in the newest building extension of 700m<sup>2</sup>.

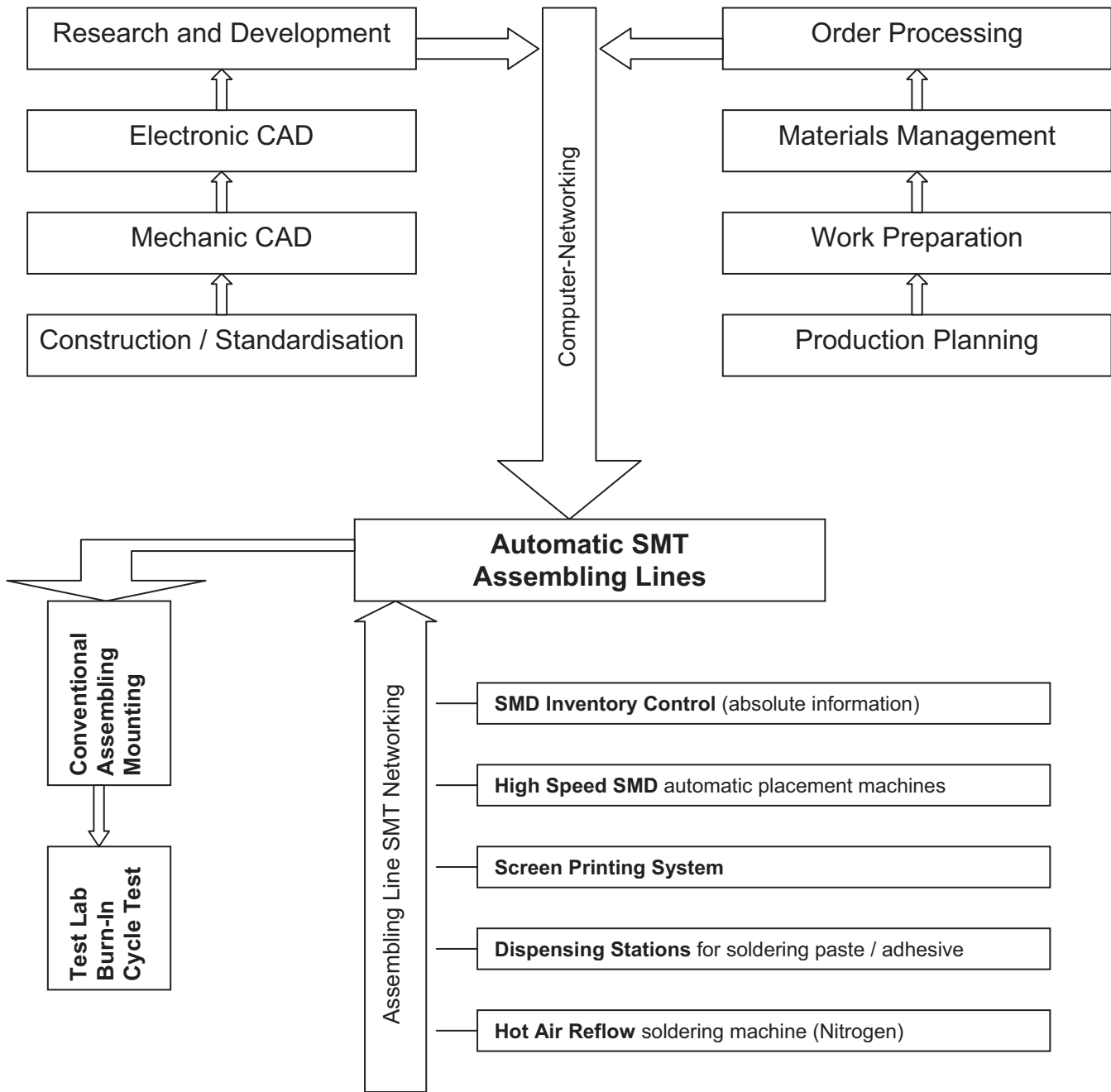
SYKO today offers a comprehensive product range of superior-quality custom-tailored and standard components, including switching regulators, regenerators, DC/DC converters, AC/DC power supply units, DC/AC power inverters and AC/AC frequency inverters.

SYKO's products are characterized by extremely wide input voltage and temperature ranges, excellent interference suppression, multiple and functional independent outputs and mechanical robustness, which is easy to design with the individually developed and patented switching topology concepts. They are compliant with the relevant railway standards, such as EN 60950, EN 55022.B, EN 50155/121, EN 61000-4-4/5, RIA 12, IEC 1287 Level X, UIC 550, military standards VG and MIL and for the mobile, naval and avionic market segments DIN ISO 7637, Stanag, GL, DO. We supply systems on land, in water and in the air.

In the course of the European market distribution partners are established in the neighbour countries, which exclusively sell SYKO products. In Germany the sales is coordinated directly from Mainhausen to keep the close contact to the customer side with technical support at any time. SYKO focused the sales strategy to special market requirements and customized solutions. SYKO is able to modify new converter designs to a series product in very short times.

Based on standardized circuit topologies, SYKO can deal with customer-specific modifications and custom developments as easily as with standard technologies. In most cases, a fully functional serial prototype (including layout, prototype article inspection and preparing for series production) can be delivered within 6-10 weeks.

Today SYKO offers one of the most varied and standard-requirement adjusted power supply program.



SYKO works with a experienced and practiced quality insurance system in accordance to the DIN ISO 9001, which has been audited positively many times. The production planning system (PPS) allows a high degree on automatization for the materials management and order processing. Specified processing, manufacturing, test instructions as well as quality guidelines ensure the constant quality level or lead to the product's improvement.

The new, full-automated High-Speed-SMD assembling lines are linked to the PPS-network and to the R&D department's CAD-systems. With this network all manufacturing relevant information and data are kept on the actual stand continuously.

Economical manufacturing of all batch sizes, from single pieces up to high quantities is possible by the use of modern SMD-assembling machines with intelligent component feeders. A separation between „standard supply“ and „prototype“ is not necessary any more. The customer wishes are our standard.

Product lines	Features	Galvanic isolation	Power range
<b>A</b> <i>DC/DC converters</i>	<b>Step down concept / Buck converter</b> PCB-modules, 19"-rack versions, chassis mounting	no	3W - 7,5kW
<b>B</b> <i>DC/DC converters</i>	<b>Regenerators / Step up-step down concept</b> PCB-modules, 19"-rack versions, chassis mounting, car-adapters, exciters, field regulators, coil drivers	no	3W - 2kW
<b>C</b> <i>DC/DC converters</i>	<b>Modules, multiple outputs</b> PCB-modules, chassis mounting, car-adapters, display-converters	yes	1W - 90W
<b>D</b> <i>DC/DC converters</i>	<b>Supplementary supplies</b> PCB-modules, 19"-rack versions, chassis mounting, limited Uin-range, supplied on front end-converters	yes	3W - 120W
<b>E</b> <i>DC/DC converters</i>	<b>System converters</b> 19"-rack versions, chassis mounting, requirement adapted, no external application circuit necessary	yes	3W - 9000W
<b>F</b> <i>AC/DC supplies</i>	<b>Supplies with universal input AC and DC</b> PCB-modules, 19"-rack versions, chassis mounting, DC and AC input without change over	yes	20W - 250W Power sharing >250W
<b>G</b> <i>DC/AC inverters</i>	<b>DC/AC with 1Ph/3Ph sine wave output</b> On battery voltages, traction line voltage 750V, fuel cells, intermediate voltages, UIC voltages	yes / no	0,4 - 5kVA
<b>H</b> <i>High voltage converters</i> DC/DC and AC/DC	<b>AC and AC input, battery chargers</b> On battery voltages from 220V, traction line voltage 750V, fuel cells, intermediate voltages, UIC voltages	yes	bis 5kW Power sharing n x 5kW
<b>K</b> <i>Customised</i>	<b>According to specifications / customer requirements</b> As sum of all product lines	yes / no	up to 5kW Power sharing n x 5kW
<b>L</b> <i>Filters, Hold-up time</i>	<b>Transient protection / power interrupt bridging</b> PCB-modules, 19"-rack versions, chassis mounting, AFI-modules, system compatible pre-filters		
<b>M</b> <i>Accessories</i>	<b>Capacitors, chokes, front panels</b> <b>General explanations</b>		