Think Future!
Specific applications for electric drive technology and power electronics
Systems solutions require system know-how

Our comprehensive systems expertise in electric drive technology and power electronics is based on our specialist knowledge of electrical machines with related inverters/DC-DC converters, including the associated software, along with the courage to change perspective.

We have the expertise to combine single components into individual systems solutions. By pooling our experience, knowledge and technology, we are able to meet your requirements with precision.

Drivetek supplies you with high-end customized drive systems solutions, from scratch or to optimize form factor, size, weight, or functionality.

Systems engineering
Cost-effective! Model-based system development:
- Systems modelling and analysis expertise
- Hardware/software co-simulation

Electrical machines
Your partner for permanent magnet machines:
- High-performance electric motors and generators
- Outstanding power density and efficiency
- From prototyping to series production

Hardware
From power to control:
- Advanced SiC or IGBT inverters for main and auxiliary drives
- Low-voltage MOSFET inverters
- Grid-tied or island-mode power generation inverters
- Highly efficient and compact DC/DC converters (isolated / non-isolated)
- DSP- and/or FPGA-based control electronics

Software
Because we understand the system:
- Embedded real-time applications on DSP and FPGA devices
- Motor control strategies for maximum efficiency
- Software solutions for grid-tied and island-mode power generation
- QUASAR™ proprietary motor control software for all machine types
- Q-control, proprietary Windows®-based diagnostic and configuration tools
Drivetek specializes in drive systems for elevators, active harmonic filters, active front ends, and the engineering of complete plants. They also offer the replacement of pneumatic and hydraulic drives.

Productive and efficient industry drive systems

Cost pressure and competition are diametrically opposed in industrial applications. Plants and machines should be faster, more reliable, and more economical. At the same time, they are increasingly required to stand out in terms of functionality and performance.

When standard control and drive solutions no longer meet these requirements, Drivetek develops tailor-made solutions: new products that impress both customers and competitors with their high performance, compactness, and functionality.

Electrified solutions for aerospace

Drivetek offers expertise and precise compliance with a structured approach to develop highly specialized drives for the aerospace industry. They have a track record of developing drive solutions for various applications, including the Terrafugia TRANSITION roadable aircraft.

Technology for the energy transition

Energy is a precious resource! Drivetek technology is applied specifically to save energy thanks to higher efficiency or to exploit renewable energy resources. The technological basis for this is provided by highly efficient, variable-speed permanent magnet generators, low-loss converter topologies as well as inverters for grid-tied or island-mode power generation. The variable-speed technology significantly improves the partial load efficiency of wind and hydro power.

Drivetek technology makes the use of energy sources economical. They develop cost-effective components thanks to synergies with solutions from automotive or industrial technologies.

Drivetek has an enormous wealth of experience in combined heat and power units (CHP). They consistently apply this knowledge in small gas turbines applications and fuel cell CHP plants.
Outline your request and we will design/construct the solution: with a neutral view, fresh approaches, sound knowledge, and with the help of state-of-the-art technology. On request, our engineers provide customers with support along the entire process chain or for individual phases, from the idea to the product launch.

Analysis

Before the actual development work, we take the time to familiarize ourselves with your future product and your application. Based on the understanding gained, we then work alongside you to define the development goal and optimization criteria.

Specification

In line with the requirements, we carry out performance simulations from which we derive the specifications for the drive system. Error analyses and parameter variations can be tested quickly and easily on the model. This process saves precious time and hence money. We can consider functional safety requirements according to ISO 26262 right from the first step.

Development

We develop electric drives, inverters and DC/DC converters offering unparalleled performance and first-class efficiency. Testing is carried out in our fully equipped test environment.

Prototyping and serial production

Prototype production and serial production of customer-specific drive systems take place in-house or in collaboration with a network of highly qualified suppliers.

Industrialization

We assist you every step of the way, from sample to series production, and ensure that the design meets your requirements in terms of manufacturability and production costs.

Electric motor test benches

Our test benches are tailored to the conditions typically seen on our markets. They are designed for testing, validating and characterizing drive systems in various configurations and for parameterizing and optimizing electrical machines.

Three motor test benches with outputs of up to 250 kW, torques of up to 1,000 Nm, a speed range of up to 15,000 rpm, and DC power supplies of up to 1,000V are available.