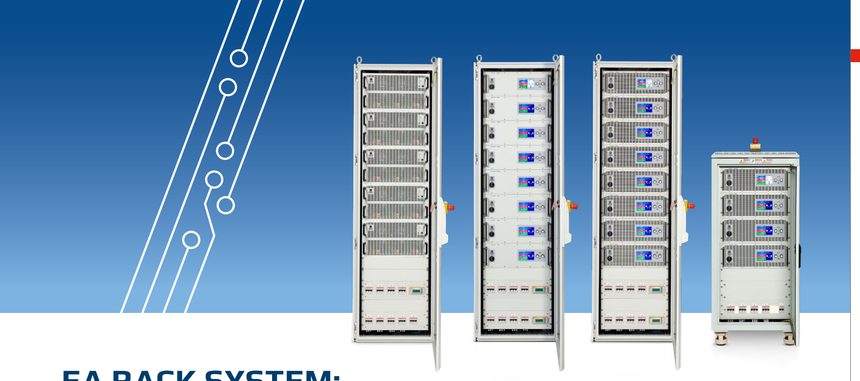


EA RACK SYSTEM:

Modular design for flexibility & efficiency

To meet the challenges of developing and producing electrolysis stacks and fuel cells, our rack systems are ideal: the programmable power supplies, bidirectional power supplies or regenerative loads of the EA-10000 and EA-10000 Industrial Series can be combined completely according to requirements. This results in a wide range of performance:

Powerful performance

- Modular rack systems with 42U, 38U, 24U and 15U
- Integrable devices in height units 3U, 4U and 6U
- Increased system performance due to parallel connection:
  - 300 kW in only one 42U rack with 5 devices of 60 kW/6U each
  - 3.84 MW in only 13 racks with up to 64 devices

All rack systems are configured customer-specific by EA Elektro-Automatik and handed over turnkey. Users additionally benefit from the following advantages:

- Autoranging
- Energy recovery
- Optional water cooling
- Optional mains and system protection
- Optional insulation monitor
- Optional DC protection devices

Conclusion:

Performance in a nutshell, thanks to modular design EA rack systems can be configured to meet all necessary requirements.

LEADING-EDGE POWER ELECTRONICS MADE BY EA

Wide application spectrum. Technological excellence. Global customer reach.

The EA Elektro-Automatik Group is Europe's leading supplier in the area of power electronics for R & D and industrial application. At the headquarters in Germany in the industrial centre of North Rhine-Westphalia, more than 450 qualified associates, research, develop and manufacture high-tech equipment for laboratory power supply, high power mains adaptors and electronic loads with or without power feedback.

Development partner in forward looking sectors

With high performance criteria and a broad application spectrum, EA has established itself as the development partner in forward looking sectors. Our devices are used across industries – from battery and fuel cell technology, wind and solar energy, to electrochemicals processes, telecommunications and more.

Automated quality assurance

Results and experience from decades of R & D flow continually into new solutions. Automatic test systems with specially developed soft- and hardware assure consistently high product quality. Flexible production processes support fast reaction to changing customer requirements.

Global customer reach, value sharing

As a mid-size company EA is totally responsible for the production location in Germany but acts globally with branches in China and USA, sales office in Spain and a wide network of partners. Value sharing, mutual respect and open communication characterise our organization.

Technological excellence is driving innovation of tomorrow

The foundation of the company in 1974 was based on innovation, a tradition which is maintained today. What started with the development of simple mains adaptors is continued today in the overall concept of technology leadership. With highly specialised power supply systems for a multitude of applications, EA is driving the future of power electronics – technologically excellent, designed for resource protection and energy saving and conceived for a multitude of applications.

Elektro-Automatik

NEXT LEVEL TESTING FOR GREEN ENERGY

Power electronics for electrolysis systems and fuel cells

GENERATE, CONVERT, STORE:

Making renewable energies permanently usable

Whether electromobility batteries or photovoltaic simulation, for many years now EA Elektro-Automatik has been making a decisive contribution to the development of green technologies with its solutions for years, so that innovations can be tested and brought to market maturity in record time. In the course of the energy turnaround, one aspect is now more in focus than ever: the long-term storage of renewable energies.

Here, too, we provide engineers with powerful equipment for the development and optimization of electrolysis stacks and fuel cells with high-performance equipment.

This results in numerous advantages for these industries:

- ✓ Use of an established device portfolio
- ✓ Cutting-edge technologies
- ✓ Wide power range with up to 60 kW
- ✓ Tailor-made functions for practical applications
- ✓ Comprehensive service and maintenance updates

ELECTROLYSIS:

Market ramp-up with up to 3.84 MW

The demand for electrolysis plants is growing rapidly and is putting pressure on manufacturers to and production of electrolysis stacks. The new **EA-10000 Industrial Series** is helping the industry accelerate the market ramp-up with electrolysis stack testing. Key benefits at a glance:

Powerful performance

- 6U Power with 60 kW including 21 models
- 4U Power with 30 kW including 29 models
- Large selection of 50 models for special applications

Powerful rack performance

- A 19" rack with 42U for a system with 300 kW
- One unit with up to 13 racks with 64 units of 60 kW each
- For high power applications up to 3.84 MW

Powerful efficiency

- Fewer units for a high-power system
- Less floor space required
- Less operating costs

Conclusion:

Highest power density for cost effective factory production testing.

FUEL CELLS:

Further development with smart features

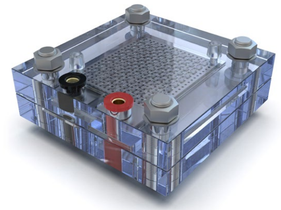
Fuel cells have long been criticized from an economic point of view because of their high production costs. Now, as an energy source, they can become a game changer for energy transition. The only prerequisite is that production and operation be more efficient. The expanded **EA-10000 Series** supports engineers in this task.

Selection

More than 180 devices: programmable DC power supplies, bidirectional DC power supplies and regenerative electronic loads. All devices are available in 2U, 3U and 4U height units.

Performance

600 W to 30 kW, output currents from 6 A to 1000 A and output voltage from 10 V to 2000 V.



Energy recovery

Efficient up to over 96%, saves electricity and reduces costs, as heat generation is significantly reduced and no additional cooling is required.

Function generator

Generates complex signals as a function of a DC bias voltage and simulates properties of solar cells, batteries and fuel cells.

Autoranging

Autoranging allows the device to deliver higher voltage at lower currents and higher current at lower voltages at maximum power.

Conclusion:

Lots of power and smart features for testing and simulating fuel cells.