DATA CENTER

MEETING ALL POWER REQUIREMENTS IN THE DATA CENTER
DO YOU HAVE THE **POWER**
TO GROW YOUR DATA CENTER
BUSINESS?

Data center operation is a “no compromise” business. Customers are buying peace-of-mind and a guarantee for continuous and secure operation of their business-critical IT systems. That’s why the power supply solution is a top priority for data center builders and operators.

That is also why DC power solutions are becoming the preferred alternative. Based on modern, modular switch-mode technology, they offer greater reliability and availability than traditional AC based solutions – in a simpler way, at a lower cost – and with incomparable scalability.

A power solution from Eltek combines the advantages of DC power while meeting specific AC demands, providing the power you need to grow your data center business into the future.
COST EFFICIENCY in investment and operation

POWER AVAILABILITY
With high MTBF and very short MTTR it “never” fails.

RELIABILITY
Optimal performance with DC technology

FLEXIBILITY
to meet different requirements

SCALABILITY
Easy to upgrade with growing needs

COMPACTNESS
Saves space

COST EFFICIENCY in investment and operation

HIGH EFFICIENCY
Reduces energy use and cost
ELTEK POWER SYSTEMS
MEETING ALL DATA CENTER NEEDS

Eltek is a global power conversion specialist with a complete range of power systems for the data center - meeting all requirements for various input and output voltages, AC and DC. Based on the industry-leading Flatpack2 rectifier and other modules, very powerful and efficient solutions are easy to design, assemble and deliver with short lead times.

DISTRIBUTED POWER SOLUTIONS
Large and leading operators of data centers are drivers behind an increased use of distributed power solutions. Eltek distributed solutions offer very high efficiency through rectifier efficiency, short distance from power system to server, fewer power conversions and ultimate scalability.

CENTRAL DC SOLUTIONS
Eltek’s central DC solutions are prime examples of the advantages of DC technology: modularity, wide range of system voltages to fit various applications, multiple feeds and very high reliability. Available in 48, 220 or 380VDC versions.
FLEXILOAD SOLUTIONS
“Flexiload DC” solutions combine 220VDC central power solutions with full flexibility to meet any requirement in the server cabinet. The 220VDC can be converted to 48VDC, to 230 AC, or be used directly in servers able to accept 220DC input (which often is the case for servers designed for 230 VAC). With Flexiload DC, you get full redundancy throughout the power chain and full flexibility in the server cabinets.

RELIABILITY AND AVAILABILITY
With leading modular technology in systems with redundant modules and extremely short MTTR, the power availability is unmatched.

DC technology also simplifies multiple feeds which further improve the overall performance.

Reliability can also be enhanced by introducing a separate rectifier section for the generator. This enables a seamless transfer of load from grid to generator, for testing or in case of a real mains fault. No switchgear or single point of failure is required.

FLEXIBILITY
With Eltek power solutions comes a flexibility to power any server. Front end conversion to any voltage and power level is possible with the wide selection of power modules.

HIGH EFFICIENCY
Eltek’s unique power conversion technology is the result of decades of intensive research and technical breakthroughs, and has defined “high efficiency” in the power industry for years. With converter efficiency of up to 96.5%, the power loss during conversion is minimized, with resulting significant cost savings and reduced environmental impact.

COST EFFICIENCY
Eltek systems will compare favorably to competitors. Our HE systems use less energy to secure continuous operation of data center equipment, and will in actual fact pay for themselves over the course of just a few years in operation.

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SCALABILITY
The modular architecture of Eltek’s power systems makes them extremely scalable. From a number of pre-defined off-the-shelf systems, customized solutions can be implemented for a variety of applications and handle wide ranges of input and output voltages. They will meet both current and future power needs.

COMPACTNESS
Eltek modules and systems are renowned for very compact design and high power density. They will deliver maximum performance in the smallest possible format and fit into locations where space is a scarce commodity.
THE ELTEK FLEXILOAD DC IN A COMPLETE CONTAINERIZED DATA CENTER

Taking modularity to a new dimension, Eltek has designed a complete containerized data center power module. It can be operated on its own as a stand alone data center or with several containers to form a larger data center. With the Flexiload power concept at the center of the design, full flexibility is provided for servers in terms of supply voltage and power rating. A combination of free and active cooling provides energy efficient thermal management that makes the solution suitable for most climates.

RELIABILITY
Modular DC technology provides optimal reliability and power availability. With DC, integration of redundant feeds is simplified and further improves the overall reliability.

FLEXIBILITY
The modular technology provides expandability at all levels. Expand capacity within one cabinet, within one container, or add more containers. The power conversion in server cabinets enables provision of different supply voltages to servers.

HIGH EFFICIENCY
The Eltek HE technology is used in all power modules in the container. This provides high power utilization and minimum waste.

Explore the ingenuity of the containerized solution. Scan QR code to watch video.
AIR INLET
Energy efficient Free Cooling principle using filtered outside air. For cold ambient temperatures, parts of the hot air from the servers will be recirculated through automatic dampers, to provide an optimal operational temperature.

AIR OUTLET

PROCESS COOLER
Active cooler to provide cooling for incoming air at higher ambient temperatures.

SERVER CABINETS
Up to 12 server cabinets.

GENERATOR

DISTRIBUTION
Common distribution for the power systems with redundant feeds to the server cabinets.

BATTERIES
Up to 150 kWh of batteries with optimal operating conditions.

DC POWER SYSTEMS
Two modular DC power systems, up to 200kW each. One system connected to the grid for normal operation, the other to the generator. No switchgear required, no single point of failure and optimal generator testing and operation. Voltage can be 48VDC, 220VDC or 380VDC.

1. Extremely reliable
2. Highly efficient
3. Indefinitely scalable
ELTEK SYSTEMS AND MODULES

Through a variety of high quality and energy efficient power modules and systems, Eltek can provide a reliable, flexible and scalable solution for almost any power need in data centers.

**FLATPACK 2 DISTRIBUTED POWER SOLUTION**

A complete power system with high efficiency rectifiers, back-up batteries, distribution and an advanced controller. Standard product with a variety of configurable options and power ratings.

**FEATURES**
- Modular & scalable power system
- High reliability through quality and redundancy
- Power ratings up to 54 kW
- Battery capacity up to 30 kWh.
- Smartpack 2 controller for optimal system monitoring and control
- Available for 48VDC, 220VDC and 380VDC

**APPLICATION EXAMPLE:** Conversion of AC or high voltage DC to applicable server voltage

**SERVER POWER/FRONT END**

Through a variety of building blocks, Eltek can provide solutions to meet most power requirements in the server cabinets. Modular, scalable and redundant solutions can be provided based on rectifiers, DC/DC converters or inverters.

**FEATURES**
- Modular & scalable power system
- High reliability through quality and redundancy
- High power density
- High efficiency rectifiers, DC/DC converters and inverters.
- Redundant uninterruptable 48VDC output

**APPLICATION EXAMPLE:** Conversion of AC or high voltage DC to applicable server voltage

**INVERPACK 2 INVERTER SYSTEM**

Inverter system from 220VDC to 230VAC providing the option for a modular and reliable “distributed AC UPS” solution.

**FEATURES**
- Modular & scalable inverter system
- High reliability
- Up to 18 kW capacity
- High power density

**APPLICATION EXAMPLE:** Providing a distributed AC UPS functionality for loads requiring 230 VAC supply

**CENTRAL POWER SYSTEMS**

With single cabinets housing up to 216 kW of DC power, there is virtually no limit to the scalability of Eltek’s central power solutions. Central power systems can be designed for a variety of voltages and power ratings.

**FEATURES**
- Modular & scalable power system
- High reliability through quality and redundancy
- Extremely compact
- High efficiency rectifiers
- Available for 48VDC, 220VDC or 380 VDC.

**APPLICATION EXAMPLE:** Conversion of AC or high voltage DC to applicable server voltage
<table>
<thead>
<tr>
<th><strong>APPLICATION EXAMPLE:</strong> Providing 48V in server cabinets, with or without back-up batteries</th>
<th><strong>FEATURES:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- 48VDC/3 kW</td>
<td>- 96% efficiency</td>
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<td>- 12V/500mA and 5.25V/750mA auxiliary outputs</td>
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<td>- Wide input range</td>
<td>- I²C communication bus</td>
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<td><strong>APPLICATION EXAMPLE:</strong> Distributed power solution or larger central 48V power solutions. Can also be used as a DC/DC converter from 220VDC to 48VDC</td>
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<td>- 2 or 3 kW</td>
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<td>- 3,2” TFT high res screen</td>
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<td><strong>APPLICATION EXAMPLE:</strong> High end controller with almost unlimited functionality power system, batteries, climate control and other functions</td>
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Eltek has more than 40 years of experience as a power conversion specialist. Driven by a strong ambition to push the frontiers of technology, our hallmark has always been an ability to develop power conversion products that set the industry standard when it comes to efficiency, power density and flexibility.

Eltek is a power specialist with true global coverage, while our capabilities and capacity around the world are firmly rooted in the local business environment. This enables us to serve customers in the best possible way, whether they are global, regional or local.
SERVICES THAT MAKE A DIFFERENCE

With extensive expertise, our global organization and the commitment of our power professionals as a basis, our solutions and services include site surveys, project management, installation and commissioning, maintenance, battery maintenance, emergency services and training.