

EPLAX
A POWERBOX COMPANY

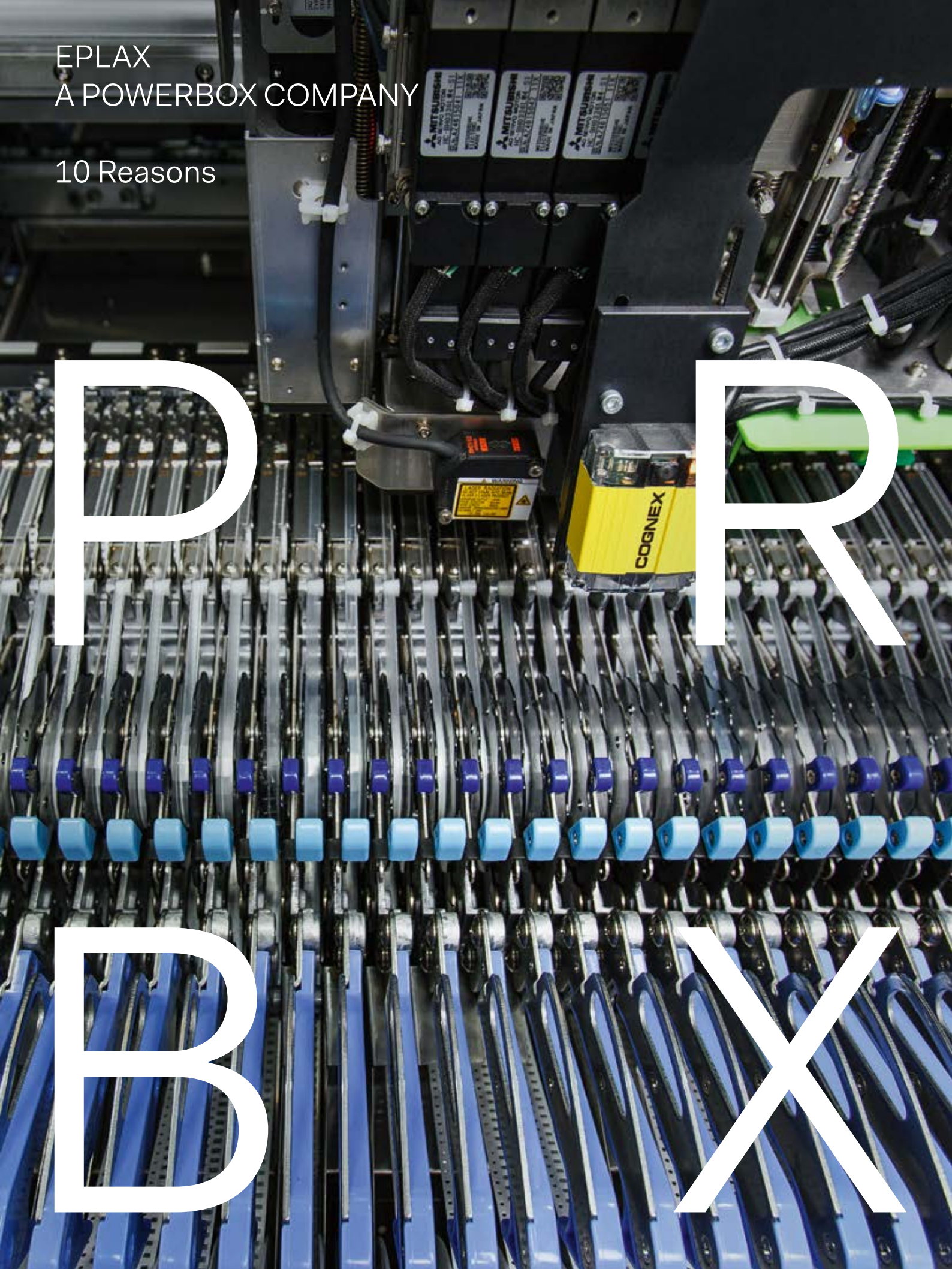
10 Reasons

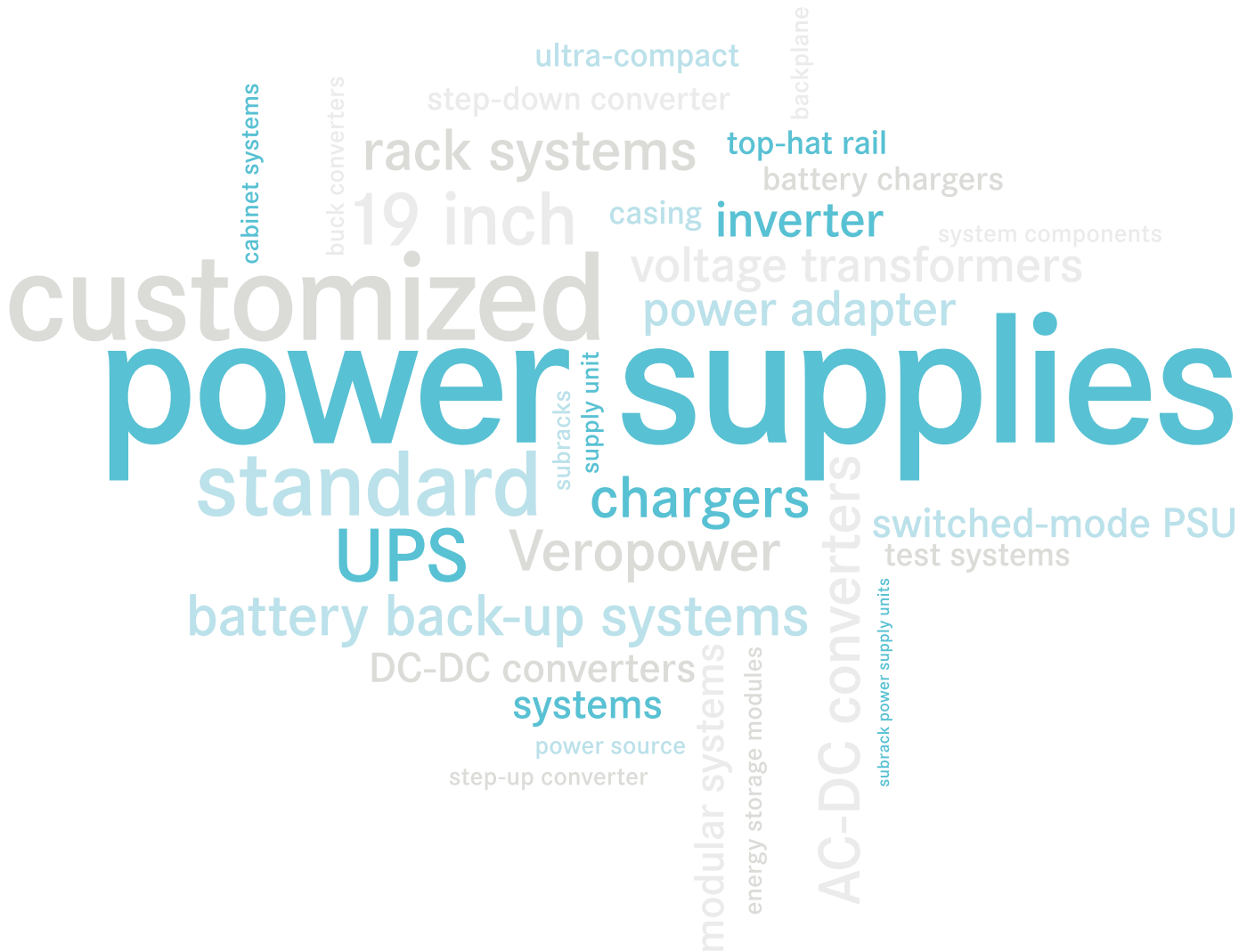
P

R

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A word cloud centered around the words "power" and "supplies". The words are in various sizes and orientations, representing different types of power supply products and components. The most prominent words are "power" and "supplies" in a large, bold, teal font. Other significant words include "customized", "standard", "UPS", "batteries", "converters", "systems", "chargers", "inverter", "transformers", "adapters", "modules", "units", "backplane", "cabinet", "racks", "19 inch", "step-down", "step-up", "DC-DC", "AC-DC", "switched-mode", "Veropower", "battery back-up", "modular", "energy storage", "subrack", "power source", "casing", "top-hat rail", "battery chargers", "system components", "voltage", "power adapter", "subbracks", "supply unit", "backplane", "cabinet systems", "buck converters", "ultra-compact", "step-down converter", "19 inch", "casing", "inverter", "voltage transformers", "power adapter", "subbracks", "supply unit", "chargers", "UPS", "Veropower", "battery back-up systems", "DC-DC converters", "systems", "power source", "step-up converter", "modular systems", "energy storage modules", "AC-DC converters", "subrack power supply units", "switched-mode PSU", "test systems", "backplane", "top-hat rail", "battery chargers", "system components", "cabinet systems", "buck converters", "ultra-compact", "step-down converter", "19 inch", "casing", "inverter", "voltage transformers", "power adapter", "subbracks", "supply unit", "chargers", "UPS", "Veropower", "battery back-up systems", "DC-DC converters", "systems", "power source", "step-up converter", "modular systems", "energy storage modules", "AC-DC converters", "subrack power supply units", "switched-mode PSU", "test systems".

ultra-compact
backplane
step-down converter
cabinet systems
buck converters
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subrack power supply units

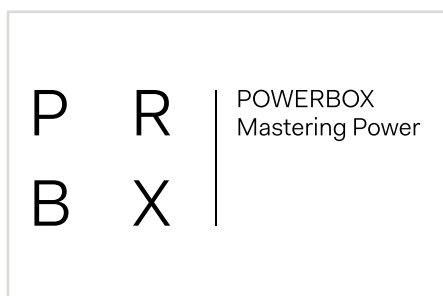
Mastering Power.

Who is EPLAX?

Part of the Powerbox Group, EPLAX is specialized in developing and manufacturing power supplies for demanding applications – quickly and professionally. Increasing your competitiveness and simplifying your involvement with power.

Our products and solutions we offer are constantly evolving, responding to the demands of a changing world. The one constant is our aim – optimized power solutions for demanding applications.

We believe that our experience, the expertise of our highly qualified staff and the high quality of our power supplies all support our claim. We would like to share the 10 reasons why we are the number one source for power supplies.



In 15 countries and with more than 3,500 custom projects, the Powerbox Group is the market leader in power supplies for demanding application



EPLAX headquarters in Bremen



The name EPLAX is derived from "electroplax", the electric organ of numerous sea fish (image: torpedo ray)



1. Development

Thanks to our rich and unique design pool our development times are short

With more than 1,000 implemented power supply solutions we own one of the most comprehensive libraries of circuit layouts, specifications, mechanics and specialized expertise. Our new power supplies build on this platform. This allows us to develop customized solutions in a shorter time and at a lower total cost to our customers.

- experienced, highly qualified development teams and an extensive library of proven technical solutions
- design teams that are flexibly matched for each individual requirement.
- teams composed of EMC experts, CAD specialists, top programmers, etc.
- project managers as your main point of contact
- over 60 % of our staff are electronic engineers or technicians



Our basis: a vast design pool of technical solutions



A design team discusses a project



Our development teams are composed of experienced engineers

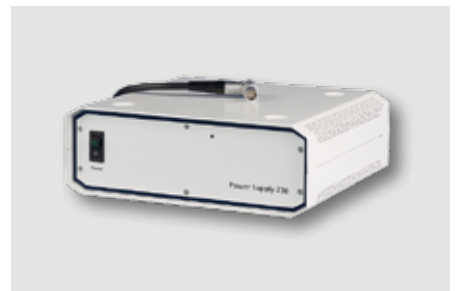


2. Manufacturing

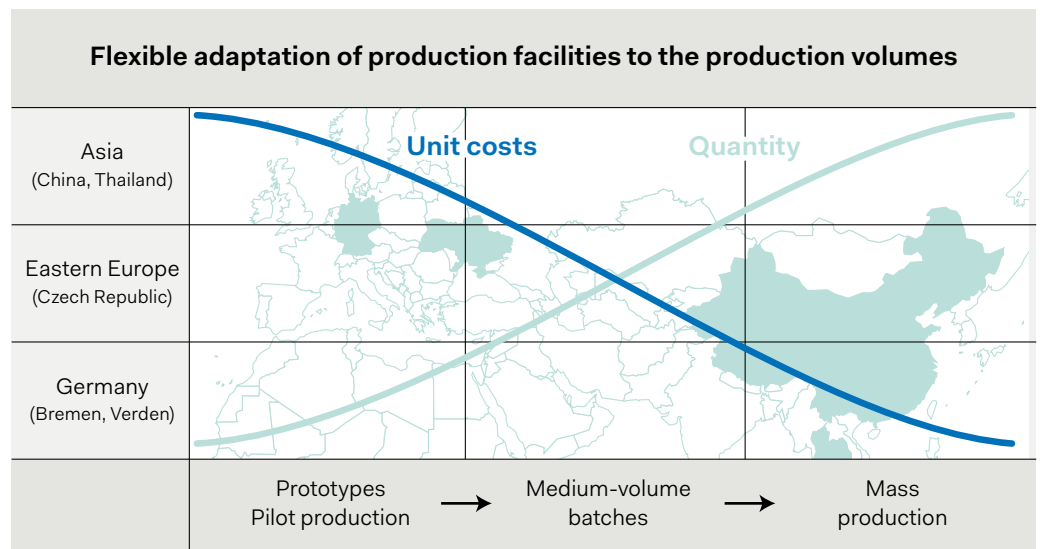
Cost-optimized manufacturing – from small batches to high volumes

We match our manufacturing approach to the required production volume in order to achieve the highest possible cost effectiveness and adapt to the product's life cycle.

- partnerships in Asia for budget-friendly large-volume production
- manufacturers in Germany and Eastern Europe for pilot production, small batches, and medium volumes
- specialized service partners for assembly and soldering processes
- UL and CSA certified production facilities
- consistently traceable production processes



Asian production and German manufacturing



Production is matched to the product's life cycle

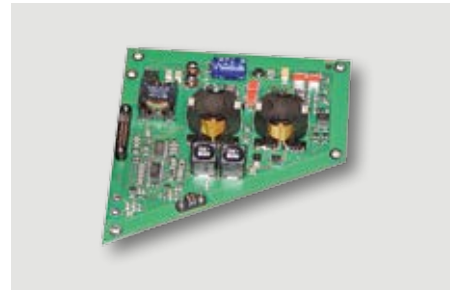


3. Economic viability

Efficiency rules

What good is a technically viable power supply solution if it doesn't fit your budget? No good at all. That is why we focus in finding and implementing efficient, budget friendly solutions – during all the project stages.

- short development period due to our extensive design pool
- we use and – if necessary – modify standard power supplies whenever possible and economically sensible
- cost-efficient production due to the flexible, volume-based choice of production location
- perfectly adapted sourcing processes to achieve competitive pricing on cost-critical components
- long product cycles and high fail safety
- low administrative costs due to flat hierarchies, fast decision procedures, and intelligently matched project teams



Thorough inspection immediately upon receipt of delivery



Swift decision procedures and flat hierarchies



Our own storage keeps time-sensitive components instantly available



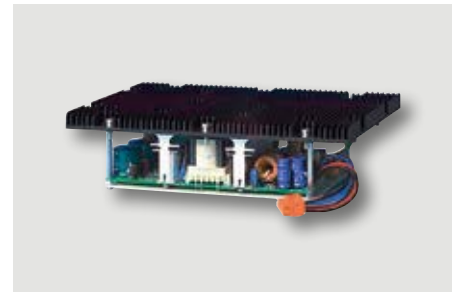
4. Ruggedness

Power supplies for the toughest environments

Power supplies often need to withstand extreme environments. Delivering fail-safe, robust power supply solutions for even the most extreme conditions is one of our specialties. Numerous railroad, aeronautics, oil industry, and military projects have provided us with a wealth of experience and expertise. Our power supplies are reliable and fail-safe under the toughest conditions, including:

- harsh vibration, eg. in rail vehicles or wind power plants
- wide operating temperature ranges, eg. -40 °C to $+85\text{ °C}$ in railway applications
- extreme humidity and condensation, eg. deep-sea environments
- extreme magnetic fields, e. g. in magnetic resonance imaging equipment with a field strength of 2 tesla

All our standard and customized power supplies offer high fail safety, long product cycles, and rugged construction.



Whether exposed to high levels of humidity ...



... shocks and vibrations ...



... or extreme weather conditions: EPLAX power supplies are reliable and fail-safe.



5. Precision

High-quality engineering without compromise

It is no coincidence that our power supplies are often used for applications in which absolute precision is essential – eg. in studio equipment, flight control systems, or power plant control technology. All technical specifications and required certifications are meticulously met and controlled.

- stable output voltage with low output noise and fluctuation
- highest levels of efficiency
- state-of-the-art switching technology (eg. DSP control)
- consistent quality management, ISO 9001 certified and monitored by independent auditors
- production control and device inspections according to UL and CSA; fulfillment of ATEX and IECEx requirements for explosive environments as well as numerous other standards for EMC, rail traffic, high performance electronics, etc.



Power supply unit for flight control systems



Medical applications require extremely high precision



DC-DC converter for control network interfaces with AISG 2.0 approval

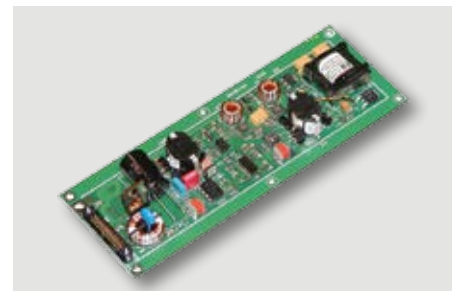


6. Testing

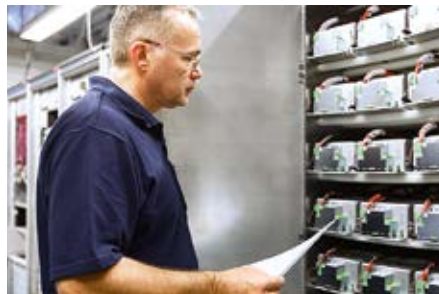
Detailed tests for each power supply unit in Germany

We test each and every device thoroughly. Our advanced, exacting test equipment ensures that initiation, safety tests, burn-in and function tests are carried out with the highest quality standards.

- 100% device-specific routine tests
- intensive check of PSU mechanicals
- microcontroller programming
- individual burn-in dimensioning
- in-house engineered measurement system
- PC-controlled test system with loads that feed back into the grid
- final controls, only via automated function testers
- long-term, traceable storage of all measurement results for each power supply unit
- testing of line regulation, load regulation (dynamically and statically), efficiency measuring, ripple and spike measuring, etc.



Visual inspection and initiation



4-hour burn-in



Automated function test



7. Adaptation

Saving cost with standard power supplies while meeting individual specifications

Often there are standard power supplies that come very close to meeting your requirements, even though they don't fulfill each and every one precisely. So why not make use of them?

Our development teams in Gnesta (SE), Bremen (DE) and Etten-Leur (NL) can adapt and qualify these devices quickly and without complications. An approach with clear benefits: you save cost when your power supply solution is based on a standard power supply.

Working with a large number of qualified partners, we are able to provide a solution to any customer. Working as a "Solution Center" the Group Powerbox is able to modify standard products, to combine different solutions from our different partners.

- global research for available standard power supplies
- sourcing and distribution through our international networks
- modification by experienced Powerbox developer, reducing cost with standard power supplies while meeting individual specifications



Our sourcing specialists search globally for standard power supplies



Together we work with you to optimize the best power solution



Standard solutions to meet your specifications



8. Integration

Seamless system integration up to level 3

We can do much more for you than just develop and manufacture your perfect power supply. Once the device is developed, produced, and tested, there are other challenges to be met: wiring, connectors, mechanics, and much more. Working closely with our customers, we have gathered extensive knowledge and experience regarding the integration of power supplies in virtually any system.

- fast turnaround, mechanically precise solutions thanks to virtual CAD prototypes
- precise, reliable assembly of cabinet systems, racks, subracks, casings, plugs, cooling and ventilation technology, etc.
- control of thermal profiles, EMC guidelines
- proprietary mechanics construction with decades of experience in customized casing
- smart interface integration (eg. I2C, USB, RS232, RS422, RS485, SPI, CAN)



System manufacturing and integration up to level 3



Virtual prototype and finished product – a comparison



Inspection system with 100 variable Veropower power supply units



9. Experience

Half a century of innovation

EPLAX arose from VERO Electronics, one of the first German switching power supply producers ever, founded in 1964. This allows us to tap into a huge wealth of experience and a unique pool of expertise: 3500 customized power supplies solutions have been developed within the Powerbox Group, of which 1000 were developed by EPLAX.

- millions of standard power supplies sold
- 50 years of experience in developing, manufacturing and integrating power supply solutions, paired with extensive practical expertise in almost all industries
- market leader for 19" Veropower standard power supplies – Veropower brand established since 1976
- sourcing, manufacturing, and specialized contacts established, intensified, and optimized over the course of decades
- highly qualified, experienced top engineers
- combining EPLAX experience with the impressive knowledge within the Powerbox Group



Our roots go back here:
VERO Electronics, founded 1964



Veropower power supplies by the Powerbox group: the 19" standard reference product



Highly qualified teams of experienced engineers and technicians



10. Network

Global network – local presence

We do not do everything ourselves but rely on the global experts for specialized applications and highly specific tasks. Our extensive, powerful network includes affiliated companies, cooperation partners, and long-standing suppliers. They all work with us to make sure that your project benefits from the best expertise and optimum capacities.

- production network with capacities in Germany, Eastern Europe, and Asia
- global distribution network and technical partners
- competence network for special applications including specialized mechanics, battery back-up, air conditioning and lighting
- specialized service partners for varnishing, component placement, sealing, assembly and soldering processes



Computer-controlled soldering line in China



30 distribution partners on 5 continents provide on-site consultation



Varnishing at our specialized service partner in Germany

Facts and figures

74

1974 — In this year Powerbox started doing what we still do — providing optimized power solutions for demanding applications. More than four decades of experience, constantly growing and at your service.

6

6,000,000 hours and counting — Proven MTBF achieved by some of our designs.

3500

3500 custom projects — Our Gnesta (SE), Bremen (DE) and Etten-Leur (NL) design centers have completed more than 3500 custom design projects.

0

0 failure tolerance — Zero tolerance concerning failures of our power supplies. Many of our designs have almost no failures, in spite of relatively large volumes sold and many years of service.

150

150 people — The core of our competence and experience is with our own 150 dedicated power people. Our product and manufacturing partners expand this number further.

15

15 countries — Our own global footprint covers 15 countries around the globe. Partners and distributors expand the footprint even further.

4

4 target markets — Although our power solutions could hold their own just about everywhere, we focus on demanding applications in four target markets; Industrial, Medical, Railway & Transportation, and Defense.

>1

1,000,000 units shipped — More than a million shipped power supplies a year might not sound like much if you are discussing phone chargers or laptop power, but for demanding applications like those our power supplies are shipped into this number speaks volumes.

>90

More than 90% returning — More than 90% of our top 20 customers from 10 years ago are still regular customers. Winning a new customer indicates they like and trust what we say. A repeat customer indicates they know and like what we do.

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Your source for power supplies

