Plating Rectifiers / DC Power Supplies
PULSE-REVERSE Power Supplies

plating electronic
we care for power

plating electronic – A FAMILY-RUN COMPANY AND A WORLD LEADER FOR DECADES

Karl Rieder
General Manager
plating electronic GmbH

- Technology leader in DC and Pulse power supplies
- Main concentration on individual customer solutions
- Meets the highest quality demands
- MADE IN GERMANY for global markets

SWITCH-MODE TECHNOLOGY

With the use of efficient, high-frequency technology, switch-mode power supplies offer many advantages over conventional rectifiers based on output adjustment by motor control or thyristor technology. Switch-mode technology is a reliable, globally recognized and robust technology and is ideally suited for use in electroplating and industrial applications. The air or water-cooled DC and Pulse power supplies can also be easily integrated into a control system.

DIGITAL CONTROL (DSP CONTROLLED)

We utilize the most up to date technology and employ digital controls in our power supplies. Our devices are characterized by excellent control accuracy and extremely low ripple.

Quick and easy connection to control units or to current BUS interfaces is another advantage of the digital technology.

Regulation inaccuracy < 1 % [1]	Better quality thanks to enhanced process sequence reproducibility. Constant current and voltage regulation.
Ripple < 1 % [1]	Qualitative benefits in many plating processes.
Compact design	Low space requirement and therefore low power losses, because installation is possible directly at the treatment baths.
Power factor up to 0.99 [2]	Energy cost savings thanks to improved grid quality and reduced reactive power component.
Efficiency up to 95 %	Low energy consumption leading to operating costs savings.
Parallel or serial connection	More flexibility thanks to easy multiplication of the performance range, in parallel or series.
Pole changer	Integrated electronic (MOSFET) pole changer, optionally available on request
Active Front End (AFE) technology	Rectifiers with integrated AFE technology have a sinusoidal current draw from the AC supply network, i.e. the same phase position of current and voltage. This leads to a reduction of harmonic oscillations to below 3 % (THDi).

[1] For control range from 1 % - 100 % and related to rated DC value.
[2] Related to rated DC value

Bench Top Rectifiers - POWER STATION up to 12 kW

Air cooled

pe1018-2
up to 750 W
up to 50 A
up to 30 V

pe1028
up to 600 W
up to 60 A
up to 250 V

pe4383
up to 6 kW
up to 300 A
up to 600 V

pe1058
up to 12 kW
up to 600 A
up to 600 V

DC Rectifiers - POWER STATION up to 48 kW

Air cooled

pe3100-1
up to 750 W
up to 50 A
up to 30 V

pe4606
up to 6 kW
up to 300 A
up to 600 V

pe4606-2
up to 12 kW
up to 600 A
up to 600 V

pe4606-3
up to 24 kW
up to 1200 A
up to 600 V

pe4606-4
up to 48 kW
up to 2200 A
up to 600 V

DC Rectifiers - POWER STATION up to 40 kW

Water cooled

pe4626-W
up to 3 kW
up to 200 A
up to 30 V

pe4203-W
up to 20 kW
up to 1200 A
up to 1000 V

pe4206-W
up to 40 kW
up to 2000 A
up to 1000 V

Are you interested in an easy and smart solution to install our DC rectifiers into a cabinet housing?
Please contact us for further details on POWER STATION pe 7010-X, our customs tailored series with multiple outputs.

Cabinet Rectifiers - POWER STATION up to 200 kW

Air cooled **Water cooled**

pe5110
up to 100 kW
up to 5000 A
up to 1000 V

pe5410-W
up to 110 kW
up to 5000 A
up to 1000 V

pe5910-W-X
up to 200 kW, up to 10,000 A, up to 1000 V
with optional integrated, electronic pole changer
AFE technology (optional)
multiple outputs possible: e.g. 4 x 2000 A

The Output power can be individually increased by parallel or serial connection

Optionally available: POWER STATION pe5910-AFE

- Sinusoidal current draw from the AC supply network, i.e. the same phase position of current and voltage
- Increased efficiency
- Power factor up to 1.00
- Reduced phase current
- Significant reduction of harmonic oscillation: THDi < 3 %
- No active line filters or compensating equipment required for AFE rectifier operation

Programmable Control Units

pe280
multi-functional control unit, also available as flush mount type

pe8007
multi-functional control unit, 12" colour touch panel, with batch programming and process monitoring, data-logging

pe900 series Control Systems

Fieldbus interfaces
CANopen
CC-Link
ControlNet
DeviceNet
Modbus-RTU
Profibus-DP
RS485

Ethernet version
EtherCAT
EtherNet/IP
Modbus-TCP
Profinet IO
Profinet IRT

Additional accessory, as for example Pole changer, Digital/Analogue Converter, PC Software, Isolation Amplifier complete our manufacturing range. Please contact us for individual data-sheets.

PULSE-REVERSE Power Supplies POWER PULSE

Air cooled

pe86CB series
Output power: max. 200 W
Effective and DC current: max. 10 A
Pulse current: max. 50 A
Effective voltage: max. 60 V

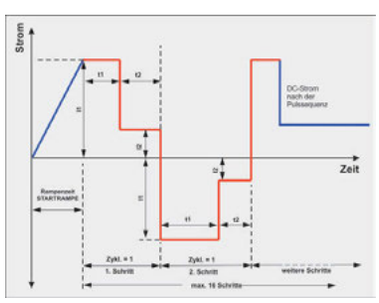
pe861 series
Output power: max. 6.36 kW
Effective and DC current: max. 318 A (2 x 159 A)
Pulse current: max. 720 A (2 x 360 A)
Effective voltage: max. 550 V

PULSE-REVERSE Power Supplies POWER PULSE

Water cooled

pe80CD series / pe86CWD series / pe8810 series
Output power: max. 224 kW
Effective and DC current: max. 4240 A
Pulse current: max. 9600 A
Effective voltage: max. 800 V
Outputs: up to 16

pe8005
programmable
control unit



Examples of pulse diagrams, schematic

Typical parameters

- Switch mode technology
- *Complex waveforms*
- Regulation inaccuracy < 1% (relative to related DC value)
- Ripple < 1% (relative to related DC value)
- Constant current and voltage regulation
- Fast rise and fall times (steep curve flanks)
- Permanently short-circuit and open-circuit proof
- Operating/programming via pe8005 control unit

Product characteristics, programmable control unit pe8005

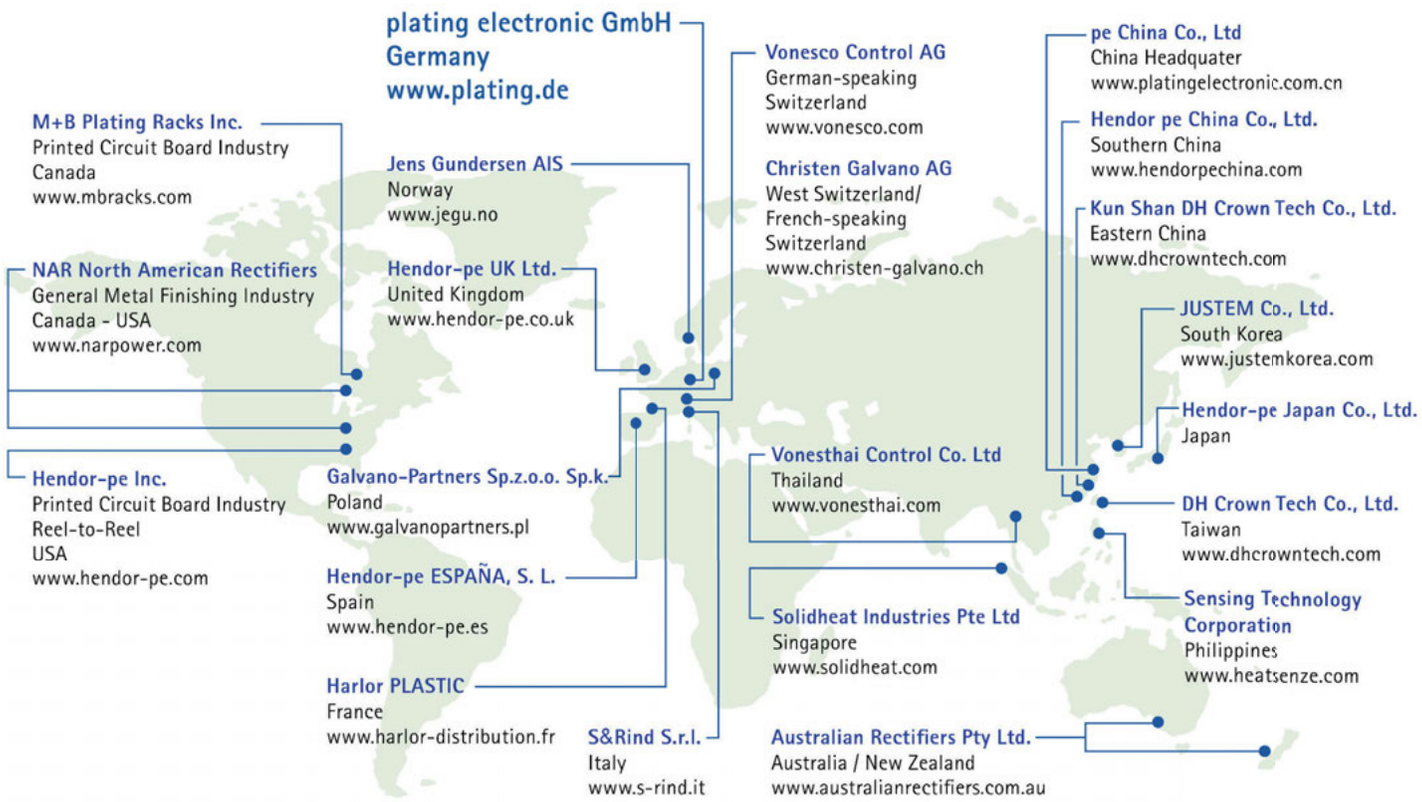
- Large, illuminated 5.7" graphic display
- Clear and user-friendly guidance leading through structured pull-down menus
- Controls from 1 to 16 outputs
- Easy generation of complex waveforms, consisting of up to 16 steps
- RS485 Bus Interface (optional: PROFIBUS, TCP/IP, Modbus)
- Synchronization function
- Ah-totalizer, dosage counter, timer, programmable START ramp, 2 configurable output relays, phase shifting
- Parameters individually adjustable even during operation
- Graphical visualization of set-values *and real-time actual value curves* (oscilloscope function)
- Resolution: 100 mA, 0.02 mSec

The Output power range can be individually multiplied using parallel connection.
The individual outputs can be synchronised as required.

plating electronic – Your specialist for DC and Pulse power supplies

Since 1986 plating electronic has been one of the leading developers and manufacturers of compact and highly specialised DC and Pulse power supplies. Our power supplies and control systems, which are exactly tailored to the specific application profiles, are in use worldwide. Global service and on-site customer support are provided by our international subsidiaries and partners.

As a medium-sized enterprise, our focus is on the fast realisation of projects and maximum customer satisfaction. Whether compact standard unit in bench-top design, plug-in, as cabinet units or specially planned solutions for a specific customer need - every power supply is suitable for the highest day-to-day requirements and continues, of course, to be MADE IN GERMANY.



For detailed information about our partners please visit: www.plating.de

If you are interested in our range of High-Current Power Supplies or Power Supplies and Controllers for ANODIZING and Aluminium Colouring. Please contact us for detailed brochures about our programmes or visit: www.plating.de.

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