

Electrolysis Rectifier OilCooled 6V till 230V / 50A till 25.000A



www.germarel.de



6V - 10V - 12V - 20V - 24V - 30V - 60V - 130V - 230V / 50 A - 25.000 A



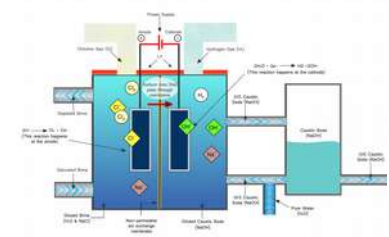
H2 Production



Electrolysis Solutions



Automation Control



Electrolysis Rectifier

- Easy Monitoring, Output Voltage Controlling and Current from Screen
- Short Circuit, Overload, Over Voltage & Over Temperature Protection
- High Frequency Switchmode or 6 Pulse or 12 Pulse Technology
- Wide Input Voltage Range for Rural Areas & 50 Hz or & 60Hz Input
- Small Footprint, Easy Maintenance & Robust & Anti Rust Cabinet
- Warning LEDs and Dry Contac or Siren or Modbust as Optional
- Easy Give Service and Updates and 20 Years Life Time Design
- Micro Chip Controlled, Fast and Precisely, Efficient Control
- 2 Years Warranty & 10 Years Spare Part Availability
- Perfect DC Supply for Industrial Solutions
- Adjustable 0.1V and 1Amper Sensitivity
- Constant Voltage or Current Option
- High Efficiency up to 91%
- Logs for Basic Problems
- Optional: Outdoor External Screen
- Optional: Stand Alone or With Wheel
- Optional Dry Contact & Modbus & GSM / GPRS Control
- Optional: Fresh Air Cooling or Oil Cooling or Water Cooling
- Optional: Engineering for Your Application for Better Solution
- Optional: Project & Client Oriented New Designs & Factory Design
- Optional: IP20 till IP65, Indoor or with Airconditioner & Cabinet or Container
- Optional: Anodizing & Electrolysis & Plating & Coloring & Static Painting
: Water Treatment & Chemical Nickel & Galvanizing & Chemical



<http://www.germarel-platingrectifier.de>

Technical Advantages of REC-GER Industrial Rectifier

10V - 12V - 20V – 24V – 30V – 60V – 100V - 230 / 50 Amper – 25.000 Amper

REC-GER series electrolysis rectifiers are developed for plating high capacity metal industry used in rectifiers use a recipe system, which allows you to keep a record of the work that has been done before, and with just a simple click, you can use the same recipe in order to define the paint thickness.

This feature makes sure that you end up with a standardized product as well as making the process as easy as possible for your operator. ... and designed for both individual for your electrical vehicles or industrial use. User friendly control panel and easy operating system is very practical to connect, control. Since the plating rectifier is electrically smart micro chips controlled plating operation is very safe, easy and extends your lead acid battery life. Day-off charging function enables the battery fully charged when it is not used and increase the life time of the battery.

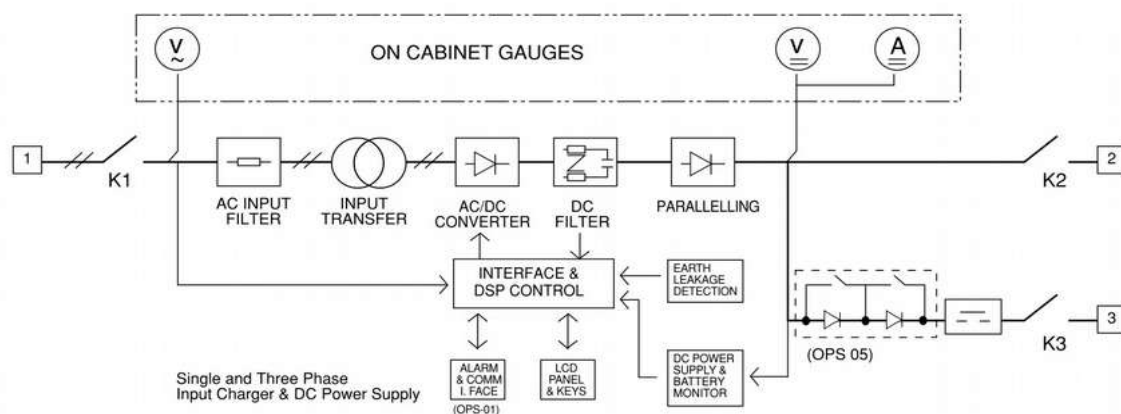
There is no need for any adjustments with Plug and play function and charging starts automatically when the battery is connected.

The anodizing rectifier consists of economic, environment-friendly, and reliable DC power supplies that use the resonant converter technology, operating at high frequencies. They have a high input power factor along with very low output voltage ripples. The plating rectifiers are used extensively for the metal sector and as customized for the clients needs.

We as Germarel, give our clients to work with us collaborative to write software together. That means how many ramps our clients want with what kind of voltage and current control let us to make our connection with our client help us and our client to produce best machines end best products.

Easy Installation in you anodizing facilities:

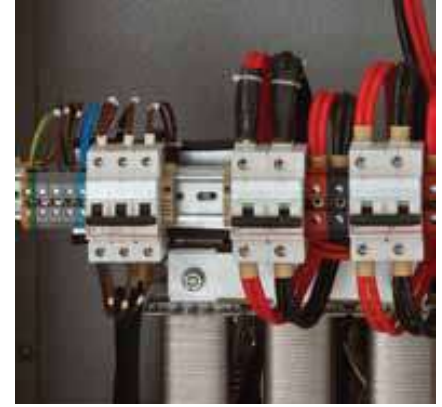
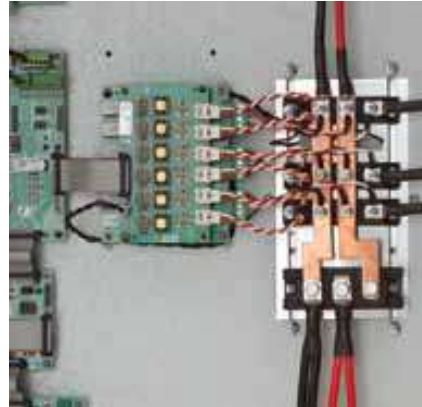
- * Ease of Maintenance for the power electronic parts
- * Operator Panel, PC or PLC control Profi - Bus
- * DP Comprehensive Error Diagnostics, Logging
- * User-Friendly Design for technicians
- * Wide Program Options, customisable
- * Functional Control Panel Options
- * Smart Bug Tracking System
- * Superior Protection Against User Errors
- * Easy to supply spare parts
- * Environmental design
- * Energy-saving system
- * Different line voltage selector
- * Perfect for chemical reaction



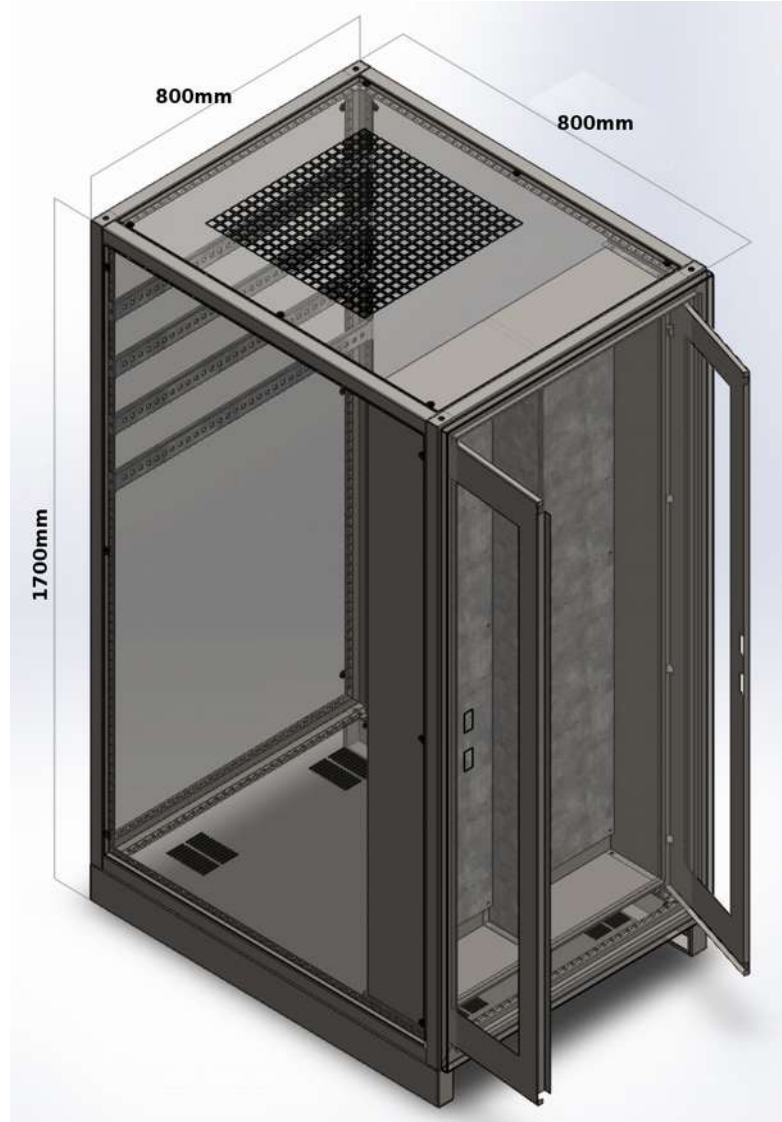
Technical Advantages of REC-GER Industrial Rectifier



Communication Interface



Technical Advantages of REC-GER Industrial Rectifier



Technical Advantages of REC-GER

Products	<input type="checkbox"/> REC- GER Anodizing	<input type="checkbox"/> REC- GER Plating	<input checked="" type="checkbox"/> REC- GER Electrolysis	<input type="checkbox"/> REC- GER Industrial
Usage Area	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor <input type="checkbox"/> Marine			
Power Watt	<input type="checkbox"/> 0.8PF <input checked="" type="checkbox"/> 0.95PF <input type="checkbox"/> 1.0PF			
INPUT				
Input Voltage	<input type="checkbox"/> 220V <input checked="" type="checkbox"/> 380V <input checked="" type="checkbox"/> 400V <input type="checkbox"/> 415V <input type="checkbox"/> 440V <input type="checkbox"/> 480V			
Input Voltage Range	<input checked="" type="checkbox"/> -%10 / +%10 (%100Load) <input type="checkbox"/> -%15 / +%10 (%90Load) <input type="checkbox"/> -%20 / +%10 (%85Load) <input type="checkbox"/> 170V – 520V Input			
Input Isolation Transformer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Input P.F. & Cable Connection	At Full Load >0.90 & <input checked="" type="checkbox"/> Bottom Cable Connection <input type="checkbox"/> Top Cable Connection <input type="checkbox"/> Backside Cable Connection			
Input Frequency	<input checked="" type="checkbox"/> 50 HZ <input checked="" type="checkbox"/> 60 HZ “44Hz - 66Hz”			
Input Connection	<input checked="" type="checkbox"/> STAR 3P+N+PE <input type="checkbox"/> Delta 3P+PE			
Input Connection	<input type="checkbox"/> Dual Input <input checked="" type="checkbox"/> Single Input			
Input Frequency Range	Wide Input Frequency Range “45Hz - 66Hz”			
Technology	<input type="checkbox"/> 6Pulse <input checked="" type="checkbox"/> 12 Pulse <input type="checkbox"/> Switch Mode Technology			
Rectifier&Harmonic Distortion THDI	<input type="checkbox"/> %2 <input type="checkbox"/> %3 <input checked="" type="checkbox"/> %7 <input type="checkbox"/> %11 <input checked="" type="checkbox"/> %30			
OUTPUT				
Output Voltage	<input type="checkbox"/> 10V <input type="checkbox"/> 15V <input checked="" type="checkbox"/> 30V <input type="checkbox"/> 110V <input type="checkbox"/> 180V <input type="checkbox"/> 230V			
Output Cable Connection	<input checked="" type="checkbox"/> Left Side Bus Bar <input type="checkbox"/> Front Side Bus Bar <input type="checkbox"/> Backside Cable Connection			
Output Filter	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Output Current	<input checked="" type="checkbox"/> 6000Amper <input type="checkbox"/> 1500Amper <input type="checkbox"/> 10.000Amper			
Output Connection	<input checked="" type="checkbox"/> 1 x “+” & 1 x” -” <input type="checkbox"/> Bi-Polar ”+ & - / - & + ”			
Output Voltage Limiting	0V & %100V / 0.1 Volt Sensitive			
Recovery & Auto Start	1% Back to Band <40ms “410V – 420V” & Auto Start Adjustable From Screen			
Efficiency	<input checked="" type="checkbox"/> Till %90 for Solutions <input type="checkbox"/> Till %92 <input type="checkbox"/> >%95			
Ripple	< %4 for 6 Pulse & <%1 for 12 Pulse & %0.1 for Switch Mode			
Current Limiting	I now x %10 = front panel 1A till 100% selectable			
COMMUNICATION				
Options	<input checked="" type="checkbox"/> RS232 Standard <input type="checkbox"/> RS485/ Modbus <input type="checkbox"/> Profibus <input checked="" type="checkbox"/> Dry Contact Card <input type="checkbox"/> External Screen <input type="checkbox"/> GPRS- GSM Control			
Rectifier Control	PLC and Micro Controller			
Communication Alerts & Logging	500 Event Logs & 180 Parameters for Each Log “As Excel Sheet” “Optional Parallel”			
STANDARDS				
Quality & Used Electrical Parts	ISO 9001 - ISO 14001 - ISO 18001 & IGBT, Thyristor Europe & Electrical parts are made in Korea, Europe & Turkey			
Performance	EN62040 -3 (VFI-SS-111)			
EMC/LVD	EN62040 - 2 / EN62040 -1 EN60950 / VDE, DIN 41773 / ANSI-NEMA PE 5			
GENERAL				
Storage & Running Temperature	Standard +5°C~35°C & <input type="checkbox"/> 0°C~40°C <input type="checkbox"/> 0°C~45°C <input checked="" type="checkbox"/> -5°C~55°C <input type="checkbox"/> -10°C~40°C			
Electrical Protection	Inpuit Over & Low Frequency / Over & Low Voltage / Over Current / Over Temperature Protection Degradation			
Protection Class	<input type="checkbox"/> IP20 <input type="checkbox"/> IP21 <input type="checkbox"/> IP22 <input type="checkbox"/> IP33 <input type="checkbox"/> IP42 <input checked="" type="checkbox"/> IP55 <input type="checkbox"/> IP65			
Chassis & Humidity & Noise	Anti-Static Anti Rust Coated Painting Protection & 0-98% & 50 Db Maximum			
Screen	Ramps & Time & Alarms & Logs <input checked="" type="checkbox"/> Analog <input checked="" type="checkbox"/> 4x20 <input type="checkbox"/> 320mmx240mm(Touchscreen) <input checked="" type="checkbox"/> External Screen			
Altitude	@40°C & after 1000Meter for each hundred meter %1 Loss <input checked="" type="checkbox"/> Till 1000m <input type="checkbox"/> Till 1500m <input type="checkbox"/> Till 2000m <input type="checkbox"/> > 2000m			
Cabinet Color	<input type="checkbox"/> Ral 7060 <input checked="" type="checkbox"/> Ral 7035 <input type="checkbox"/> Ral 7032 <input type="checkbox"/> Ral 7016 <input type="checkbox"/> Ral 1014 <input type="checkbox"/> Black			
Operation & Cooling	<input checked="" type="checkbox"/> Single <input type="checkbox"/> 2 Pieces Parallel Cooling for the Rectifier <input checked="" type="checkbox"/> Air <input type="checkbox"/> Outdoor <input type="checkbox"/> Water <input type="checkbox"/> AC <input type="checkbox"/> Oil			
EPO (Emergency Power Off)	<input checked="" type="checkbox"/> Standard for IP20 <input type="checkbox"/> Optional for Outdoor with external screen			
Certification	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> SGS <input type="checkbox"/> SASO <input checked="" type="checkbox"/> IEC <input type="checkbox"/> BV Marine <input type="checkbox"/> BV General <input type="checkbox"/> Soncap			
Vibration & Earthquake design	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Vibration Reduce <input type="checkbox"/> Seismic Standard <input type="checkbox"/> Seismic Customized			
Dimensions (WxDxH) (cm)	<input type="checkbox"/> 70X70x130 / (280kg) <input checked="" type="checkbox"/> 320x200x210 / (3960kg) <input type="checkbox"/> 360x220x240 / (3670kg) <input type="checkbox"/> 420x220x240 / (4880kg)			

The Rectifier comes without Oil. The Oil will be sold additional or you can buy locally.

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