



**GROW CONTROL
POWER TECH PVT. LTD.**

We Provide Solutions....

AN ISO 9001:2015 COMPANY



REVERSE PULSE POWER SUPPLY



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GROW CONTROL is a research-based power electronics organization that blends technology, innovation, and engineering to transform concepts into world class products and solutions.

The **Reverse Pulse Power Supply** from **GROW CONTROL** is a high-precision, robust power solution designed to provide controlled forward and reverse pulsing, ideal for applications in electroplating, electrochemical processes, and surface treatment. Leveraging GROW CONTROL's indigenous technology, this power supply ensures improved deposition quality, uniform coatings, and enhanced process control, supporting both research and industrial-scale applications

GROW CONTROL Reverse Pulse Power Supply offers a precise, high-performance solution for advanced electrochemical processes, surface treatments, and coating applications. With robust **indigenous technology**, it provides dependable and efficient power control, meeting the needs of both industrial and research applications across diverse sectors.

Features

- **Bidirectional Pulse Output:** Provides both forward and reverse polarity pulses, allowing precise control over coating and surface treatment processes.
- **Adjustable Pulse Parameters:** Customizable pulse duration, frequency, and amplitude for optimized performance across various materials and applications.
- **High Stability and Efficiency:** Low ripple and noise for consistent output, improving process quality and efficiency.
- **Robust Safety Mechanisms:** Includes over-voltage, over-current, and thermal protection for safe and stable operation in high-power environments.



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- **Remote Monitoring and Control:** Digital interfaces enable remote adjustments and real-time monitoring, ensuring ease of integration with automated systems.
- **Compact, Modular Design:** Space-saving and modular, allowing easy scalability for laboratory and industrial use.
- **EMI/EMC Compliance:** Conforms to meet EN 55022 standards, ensuring minimal interference in high-sensitivity applications.

Key Advantages

1. Indigenous Technology:

Designed and manufactured in India, providing localized support and customization to meet the specific needs of the Indian industrial sector.

2. Enhanced Coating Quality:

Reverse pulse technology improves deposition uniformity, enhances adhesion, and minimizes defects, vital for high-precision surface coatings.

3. Process Flexibility:

Adjustable pulse parameters allow fine-tuning for a wide range of materials and deposition requirements, making it ideal for both research and industrial applications.

4. Built for High Durability:

Engineered for continuous use in demanding environments, ensuring stable performance over extended operational periods.

5. Scalable and Customizable:

Modular configurations make it adaptable for various scales, from small-scale research to large industrial processes.



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Applications

1. **Electrochemical Deposition:**

Optimizes deposition processes in applications like electroplating and anodizing, improving material quality and reducing plating time.

2. **Thin-Film and Surface Coatings:**

Enables precise control over thin-film deposition and surface treatments, making it ideal for semiconductor and microelectronics manufacturing.

3. **Plasma and Surface Treatment:**

Supports reverse pulsing for enhanced plasma-based cleaning and etching processes, beneficial in material science and electronics.

4. **Defense and Aerospace Applications:**

Ideal for surface treatment processes that require high durability and precision, such as coating parts for corrosion resistance and wear protection.

5. **Research and Development:**

Offers flexibility and control, essential for experimental setups in advanced materials research and prototyping.

Customization Options

GROW CONTROL offers a wide range of customization options for the Reverse Pulse Power Supply to meet unique process requirements:

- **Voltage and Current Range Adjustments**
- **Enhanced Pulse Parameter Control (Amplitude, Duration, Frequency)**
- **Integrated Analog and Digital Interfaces**
- **Advanced Protection Options (Arc, Over-current, Short-Circuit)**
- **Cooling Customization (Air or Liquid)**
- **Modular Configurations for Scalable Output**

Our engineering team collaborates with clients to provide tailored solutions that fit their exact operational requirements, ensuring optimal performance and efficiency.



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Why Choose **GROW CONTROL**?

- **Indigenous Expertise:** Tailored to meet Indian industry standards, with local support and customization options.
- **Improved Coating Quality:** Ensures uniform, defect-free deposition, enhancing the durability and quality of treated surfaces.
- **Energy Efficient and Long-Lasting:** High efficiency with minimal heat generation, built for extended operational life.
- **Comprehensive Safety Features:** Advanced protections for stable and safe operation, ensuring reliability in high-stress environments.
- **Customer Support:** End-to-end support, including design consultation, installation, and maintenance, providing a seamless experience

Certifications

- **MIL-STD-810** – Environmental Testing Standards
- **MIL-STD-461** – Electromagnetic Compatibility Standards
- **EN 55022** – EMI Compliance
- **ISO 9001:2015** – Quality Management Systems



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“AS LONGS CONTINUES”

Technical Specification

Model no.	GC43RPS	GC23RPS	GC1003RPS
Input	230V, 1-ph, 50Hz	240V, 1-ph, 50Hz	230V, 1-ph, 50Hz
Output Voltage (V)	0 to 40	0 to 20	0-100V
Output current (A)	100	30 to 100	0-5A
Output peak Power (KW)	4	2	0.5
Resolution (mA)	100	100	100
Line regulation (%)	±0.5	±1	±1
Load regulation (%)	±0.5	±1	±1
Ripple (%)	<1	<1	<1

