



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

We Provide Solutions....

**AN ISO 9001:2015 COMPANY**



**HIGH FREQUENCY PULSE POWER SUPPLY**



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

**GROW CONTROL High Frequency Pulse Power Supply** offers a state-of-the-art solution for applications requiring precise, stable, and high-frequency pulse power. Designed with indigenous technology, these power supplies deliver rapid pulses with high peak power, low ripple, and advanced control capabilities. With over 30 years of expertise in the field of power electronics, **GROW CONTROL** has developed a reliable and ruggedized solution ideal for demanding applications in defense, plasma systems, and industrial processing.

**GROW CONTROL High Frequency Pulse Power Supplies** offer advanced, efficient, and reliable solutions for high-precision applications like plasma generation, medical imaging, and semiconductor processing. Leveraging **indigenous technology**, our products meet stringent industry and defense standards, delivering stable, high-frequency pulses for even the most demanding environments.

## **Features**

- Precision High-Frequency Pulses: Provides rapid, controlled pulse sequences with frequencies up to 100 kHz, enabling high-precision applications in plasma and semiconductor processing.
- High Peak Power Capability: Supports high peak power output, designed to handle peak demands while maintaining low energy consumption.
- Advanced Protection Mechanisms: Comprehensive protection against over-voltage, over-current, under-voltage, and short circuits to ensure safety and durability.
- Stable Output with Low Ripple: Delivers clean, ripple-free pulses, critical for high-performance applications that require stability and consistency.
- Compact and Modular Design: Available in modular, rack-mountable designs, allowing easy integration into various systems and setups.
- Remote Monitoring and Control: Digital interfaces for real-time control and monitoring, providing easy operation and quick adjustments to pulse parameters.

- Programmable Pulse Parameters: Adjustable pulse width, frequency, and duty cycle allow customization for specific application needs.
- EMI/EMC Compliance: Designed to meet EN 55022 standards, ensuring minimal electromagnetic interference in sensitive environments.

### **Key Advantages**

1. **Indigenous Technology:**

Fully designed and manufactured in India, **GROW CONTROL** High Frequency Pulse Power Supply is a cost-effective solution tailored to domestic industrial, defense, and research requirements.

2. **High Precision and Control:**

Provides precise control over pulse frequency, width, and amplitude, essential for sensitive applications in medical imaging, plasma generation, and semiconductor processing.

3. **Energy Efficient:**

High efficiency minimizes power wastage and reduces operational costs, especially important in applications requiring continuous, high-frequency pulses.

4. **Enhanced Safety and Protection:**

Equipped with multiple protection features, including thermal shutdown, short-circuit protection, and over-voltage safeguards, ensuring reliability under demanding conditions.

5. **Customizable Pulse Parameters:**

Flexibility in pulse settings (width, frequency, duty cycle) enables customization for different applications, from plasma processing to testing in research labs.

### **Applications**

1. **Plasma Generators:**

Provides stable and high-frequency pulses for plasma generation, ideal for material processing, surface treatment, and semiconductor manufacturing.

2. **Medical Imaging Systems:**

Powers medical imaging devices, delivering precise and stable pulses critical for producing high-quality imaging outputs in CT and MRI systems.

3. **Semiconductor Processing:**



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Supplies controlled pulse power for semiconductor fabrication processes, including etching, deposition, and cleaning applications.

4. **Industrial and Research Testing:**

Offers high-frequency pulsed power for testing and experimental setups, commonly used in defense research labs and industrial R&D facilities.

5. **Aerospace and Defense Applications:**

Ruggedized and reliable for pulse power requirements in radar, communication, and other high-frequency applications specific to the aerospace and defense sectors.

### Customization Options

**GROW CONTROL** provides a range of customization options to meet the unique needs of various high-frequency pulse power applications:

- Adjustable Pulse Width and Frequency
- Customizable Duty Cycles
- Cooling System Configurations (Air or Liquid)
- Form Factor Adjustments for Specific Installations
- Advanced Remote Monitoring and Control Interfaces
- Enhanced Protection Features for Safety

Our engineering team works closely with clients to develop tailored power supply solutions that meet specific operational and environmental requirements.

### Why Choose **GROW CONTROL**?

- **Indigenous Expertise:** **GROW CONTROL** indigenous technology, backed by three decades of experience, delivers high-quality power solutions for a variety of industrial and defense applications.
- **Precision & Reliability:** High stability, low ripple, and customizable pulse parameters make it ideal for sensitive and high-performance applications.
- **Energy Efficient:** High efficiency rates lead to lower energy costs and reduced operational expenses, especially in continuous-use scenarios.
- **Comprehensive Protection:** Multiple layers of protection mechanisms ensure safe and reliable operation, even under demanding conditions.



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- **Customer Support:** **GROW CONTROL** offers end-to-end support, from customization and installation to training and maintenance, ensuring a seamless and dependable user experience.

### Certifications

- **EN 55022** – EMI Compliance
- **ISO 9001:2015** – Quality Management Systems

### Technical Specification

Model no.	GCGFP S	GC252H FPPS	GC253H FPPS	GC1503H FPPS	GC103HF PPS	GC483 HFPPS	GC800 V60AP DCPS
Power (kVA)	1	2.5	25	150	10	48	48
Input	415V ±10%, 50Hz, 3- phase	415V ±10%, 50Hz, 3- phase	230V±10 %, 50Hz	415V ±10%, 50Hz, 3- phase	230V±10 %, 50Hz	415V ±10%, 50Hz	415V ±10%, 50Hz
Output Voltage	150V	175V	25KV	150	10KV	800	800
Output Current (A)	1000	2500	1	200 to 1000	1	60	60
Pulse frequency (Hz)	1-100Hz	1-100Hz	1-1000	10-100	1-100	10-30	20kHz
Resolution (V)	0.1	0.1	10V	0.1	10V	1V	3.5V
Ripple (%)	0.5	0.5%	0.5%	0.5	0.5	0.5	0.5
Regulation (%)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1	0.1
Pulse duty cycle (%)	10%- 90%	10-95%	10-95%	10-95%	10-95%	10-90	10-80



