



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

We Provide Solutions....

**AN ISO 9001:2015 COMPANY**



**FREQUENCY CONVERTER**



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

**GROW CONTROL Frequency Converter** is an advanced power electronics solution designed to convert electrical energy from one frequency to another. This technology is critical for a variety of applications, including motor control, renewable energy integration, and telecommunications systems. Utilizing **GROW CONTROL** indigenous technology, our frequency converters offer high efficiency, reliability, and precise control, ensuring optimal performance across diverse industrial and research settings.

**GROW CONTROL Frequency Converter** offers a high-performance solution for a variety of applications requiring efficient and reliable frequency conversion. Utilizing **indigenous technology**, these converters are engineered to meet the demands of industrial, research, and defense sectors, delivering exceptional performance and versatility.

### **Features**

- **Wide Frequency Range:** Capable of converting input frequencies ranging from 45 Hz to 500 Hz, accommodating various applications.
- **High Efficiency:** Designed to minimize energy losses, achieving efficiencies greater than 95% for cost-effective operation.
- **Compact and Modular Design:** Space-efficient and modular, allowing for easy integration into existing systems and scalability for future needs.
- **Advanced Control Algorithms:** Incorporates state-of-the-art digital signal processing (DSP) technology for precise control and performance optimization.
- **User-Friendly Interface:** Equipped with a digital display and remote-control options for easy monitoring and adjustment of settings.
- **Integrated Protection Mechanisms:** Features over-voltage, over-current, and thermal protection to ensure safe and reliable operation.
- **EMI/EMC Compliance:** Designed to meet MIL-STD-461 and EN 55022 standards, ensuring minimal electromagnetic interference.

## Key Advantages

### **1. Indigenous Technology:**

Developed and manufactured in India, tailored to meet local industry needs with accessible support and customization options.

### **2. Versatile Applications:**

Ideal for a wide range of applications, from industrial machinery to renewable energy systems, providing flexibility in usage.

### **3. High Reliability:**

Engineered for durability and stability, ensuring consistent performance in demanding operational environments.

### **4. Energy Efficient:**

Low power losses translate to reduced operational costs and enhanced sustainability, making it an environmentally friendly choice.

### **5. Comprehensive Customization:**

**GROW CONTROL** offers tailored solutions to meet specific operational requirements, ensuring optimal functionality for every application.

## Applications

### **1. Industrial Drives:**

Provides precise frequency control for motor drives, improving efficiency and performance in manufacturing processes.

### **2. Renewable Energy Systems:**

Essential for wind and solar applications, enabling the integration of renewable energy sources into the grid.

### **3. Telecommunications:**

Supports frequency conversion in telecom systems, ensuring reliable transmission and reception of signals.

### **4. Defense Systems:**

Used in various defense applications requiring reliable frequency conversion for radar, communication, and electronic warfare systems.

### **5. Aerospace Applications:**

Ideal for converting frequencies in aerospace systems, enhancing operational reliability and efficiency.



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## 6. Research and Development:

Supports experimental setups in research laboratories requiring precise frequency control and conversion.

### Customization Options

**GROW CONTROL** provides a variety of customization options for the Frequency Converter to accommodate specific application requirements:

- **Custom Input and Output Frequency Ranges**
- **Enhanced Control Algorithms for Specific Applications**
- **Integrated Monitoring Systems** for real-time feedback
- **Optimized Cooling Solutions** (Air or liquid)
- **Modular Configurations for Scalable Power Ratings**
- **Additional Communication Interfaces** for enhanced integration

Our engineering team works closely with clients to deliver tailored solutions that precisely fit their operational needs, ensuring optimal performance and compatibility.

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

- **Indigenous Expertise:** Tailored to meet Indian industry standards with local support for customization and maintenance.
- **Reliable and Efficient:** Designed for stability and high efficiency, ensuring consistent power delivery for critical applications.
- **Low Maintenance Requirements:** Durable design reduces wear and tear, minimizing downtime and maintenance costs.
- **Energy Efficient and Cost-Effective:** Low energy losses lead to cost savings and enhanced operational efficiency.
- **Customer Support:** From initial design consultation to installation and ongoing support, **GROW CONTROL** offers a full range of services.

### 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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\*\*\*EAS LOADING CONTROLLER\*\*\*

## Technical Specification

Model no	GC500VA FC	GC13FC	GC23FC	GC33FC	GC53FC	GC63FC	GC243FC	GC303FC	GC603FC	GC753SFC	GC3003FC
Output power (KVA)	500VA	1	2	3	5	6	24	30	60	75	300
Input power supply	230V±10%, 50Hz	230V±10%, 50Hz	230V±10%, 50Hz	230V±10%, 50Hz	415V±10%, 50Hz	230V±10%, 50Hz	415V±10%, 50Hz	415V±10%, 50Hz	415V±10%, 50Hz	415V±10%, 50Hz	415V±10%, 50Hz
Voltage Accuracy (%)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
THD (%)	<1	<1	<3	3	<1	3	<2	<3	<3	<1	≤3
Power factor	0.8										
Output frequency (Hz)	45 to 500 variable / fixed frequency										
Line regulation (%)	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.5	≤0.5	0.1	0.1
Load regulation (%)	≤0.5	≤0.5	≤0.5	0.1%	≤0.5	0.1%	0.1%	≤1	≤1	0.5	0.5





## OUR CLIENTS



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