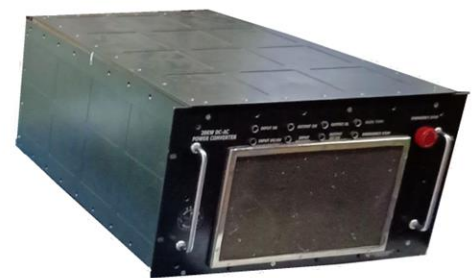


GROW CONTROL
POWER TECH PVT. LTD.

We Provide Solutions....

AN ISO 9001:2015 COMPANY



DC-AC CONVERTER

GROW CONTROL Airborne DC-AC Converters are designed with advanced indigenous technology to provide reliable and efficient AC power in demanding airborne environments. Tailored to meet the stringent requirements of defense, aviation, and aerospace applications, these converters transform DC input from aircraft power systems into high-quality AC output. Ideal for powering critical equipment in military aircraft, helicopters, UAVs (Unmanned Aerial Vehicles), and other airborne platforms, these converters are engineered to operate under extreme conditions, ensuring uninterrupted performance in mission-critical situations.

With over 30 years of expertise in power electronics, **GROW CONTROL** ensures the highest level of reliability and precision in airborne power systems.

Features

- Input Voltage: Customizable based on platform requirements
- Output Voltage: Configurable for various applications
- Power Rating: Available in power capacities from 500W to 45kW, supporting diverse operational needs.
- Efficiency: Up to 95% efficiency for optimal power conversion and minimal heat dissipation.
- Operating Temperature: -40°C to +85°C, designed to function reliably in harsh airborne environments.
- Ruggedized Construction: Built to withstand vibration, shock, and extreme environmental conditions, conforming to military standards.
- EMI/EMC Compliance: Fully compliant with MIL-STD-461 for electromagnetic interference and compatibility.
- Protection Features: Comprehensive protection including overload, short circuit, over-voltage, and thermal shutdown.
- Compact & Lightweight Design: Engineered for minimal space and weight constraints, crucial for airborne applications

Key Advantages

1. **Indigenous Technology:**
100% developed and manufactured in India, ensuring defense self-reliance while meeting national and military standards.
2. **High Reliability:**
Designed to perform in the most demanding conditions, ensuring uninterrupted power supply for mission-critical airborne operations.
3. **Customizable Output:**
Flexible configurations for voltage, frequency, and power rating, providing tailored solutions to meet specific defense and aerospace needs.
4. **Energy-Efficient Design:**
High-efficiency power conversion reduces energy loss, supporting longer operational times and reducing cooling requirements.
5. **Defense-Grade Standards:**
Compliance with MIL-STD-704 (aircraft electrical power) and MIL-STD-810 (environmental testing) ensures that products are designed for military-grade reliability and durability.
6. **Versatile Application:**
Ideal for powering critical avionics, communication systems, radars, sensors, and other onboard electronics in military and defense applications

Applications

1. Military Aircraft: Powering advanced avionics and communication systems with stable AC output from onboard DC power systems.
2. Helicopters: Reliable power conversion for mission-critical electronics, sensors, and control systems.
3. UAVs (Unmanned Aerial Vehicles): Lightweight, compact power solutions for autonomous airborne systems.
4. Defense Electronics: Supporting essential military systems such as radar, navigation, and communication equipment in airborne platforms.
5. Aerospace Equipment: Providing stable AC power to onboard instrumentation and control systems in extreme environments.

Customization Options

GROW CONTROL provides flexible, customizable solutions for defense and aerospace applications. Tailored configurations ensure that converters meet specific platform requirements, allowing for:

- Custom Input / Output Voltage and Frequency
- Power Rating Adjustments
- Form Factor Modifications
- Enhanced Environmental Hardening
- Additional Protection Features

Our design and engineering teams work closely with defense and aerospace agencies to develop solutions that perfectly align with their operational needs.

Why Choose **GROW CONTROL**?

- **Indigenous Innovation:** Committed to promoting indigenous technology and reducing reliance on foreign imports, supporting India's defense self-reliance.
- **Decades of Expertise:** With more than three decades of power electronics experience, **GROW CONTROL** delivers proven, reliable, and high-performance products.
- **Military-Grade Quality:** All products undergo stringent testing to meet defense standards and guarantee robust performance in critical applications.
- **Tailored Solutions:** Our customizable approach ensures that each DC-AC converter is designed to meet the exact requirements of specific airborne platforms.
- **CustomerSupport:** From initial consultation to post-deployment support, **GROW CONTROL** provides comprehensive assistance at every stage of the product lifecycle

Certifications

- **MIL-STD-704** – Aircraft Electrical Power Standards
- **MIL-STD-810** – Environmental Testing Standards for Military Equipment
- **MIL-STD-461** – Electromagnetic Interference (EMI) Standards
- **ISO 9001:2015** – Quality Management Systems



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Technical Specification

Model no.	GC45KWDC-AC	GC20KWDC-AC	GC38KWDC-AC
Input voltage (V DC)	750-800	750-800	290VDC
Output voltage	415V \pm 2%, 3-ph, 50Hz	415V \pm 2%, 3-ph, 50Hz	415V, 50 Hz AC, 3 phase, 4 wire
Output power (kVA)	45	20	38
Power factor	0.8 to unity	0.8 to unity	0.8
THD (%)	≤ 3	≤ 3	≤ 3
Voltage stability (%)	≤ 1	≤ 1	-
Efficiency (%)	95	95	>85
Cooling	Forced air cooling	Forced air cooling	-



OUR CLIENTS



P-5/1/A, Road No. 13, IDA Nacharam, Hyderabad - 500 076, Telangana, India.

Ph : +91- 40 -27175591, Fax : +91-40-27175386



gcptpltd@gmail.com



www.growcontrols.in