GROW CONTROL
POWER TECH PVT. LTD.

We Provide Solutions....

AN ISO 9001:2015 COMPANY

VACUUM INDUCTION FURNACE

GROW CONTROL has developed special purpose Vacuum Induction Furnace for melting applications of various metals and industrial applications. Induction melting is a process where metals are melted in a controlled atmosphere (vacuum or inert) in a vacuum chamber.

When metals are melted in a vacuum atmosphere, the chances of oxidation are significantly reduced, which helps in retaining the purity of the metal. This is because the vacuum environment removes oxygen and other reactive gases from the surroundings, which would typically cause oxidation or contamination in an open-air environment. This is particularly crucial in industries where the purity of the metal is of utmost importance, such as in aerospace, semiconductor manufacturing, and high-performance alloys. ***GROW CONTROL*** vacuum melting process is an effective way to maintain metal purity.

Features

- These environments are typically designed to minimize the presence of reactive gases, moisture, or other factors that could lead to corrosion, oxidation, or other unwanted chemical reactions.
- Efficient IGBT based Induction Furnace
- Self-diagnosing power source.
- Dedicated Technical support.
- Space-saving, compact designs that require less of your working space
- Hassle-free maintenance and minimal downtime
- Unparalleled durability for a long crucible life
- Improved production values through higher melting rates

Key Advantages

1. **Indigenous Technology:**
   Completely designed and manufactured in India, Vacuum Induction Furnace deliver solutions optimized for domestic industrial, research, and defense needs.
2. **Precision and Stability:**
   The power supplies deliver precise voltage and current with low ripple and noise, essential for high-accuracy applications like battery testing, electroplating, and electrochemical processing.
3. **Advanced Protection:**

Built-in safety mechanisms, including over-voltage, over-current, and thermal protection, ensure reliable performance in demanding applications.

4. **Customizable Configurations:**
   GROW CONTROL offers flexible options in terms of voltage, current range, and form factor, ensuring that each unit meets the unique requirements of its intended application.

Applications

- Specialty alloys production
- Suitable for melting aerospace alloys that require high precision and reliability
- Effective for melting automotive alloys for the production of critical components

Customization Options

GROW CONTROL offers a range of customization options to meet the unique power requirements of diverse industrial and defense applications:

- **Output Voltage & Current Range Adjustments**
- **Cooling System Customization**
- **Advanced Monitoring and Control Interfaces**
- **Extended Protection Features**

Our engineering team collaborates with clients to deliver tailored solutions suited to their operational, environmental, and performance needs.

Why Choose *GROW CONTROL*?

- **Indigenous Design**: Backed by over three decades of power electronics expertise, ***GROW CONTROL*** VIM meet high standards of reliability and performance.
- **Efficiency & Stability**: High efficiency and low ripple output ensure stable power delivery, critical for sensitive and precision applications in industrial, defense, and research sectors.
- **Safety and Reliability**: Designed with comprehensive protection mechanisms, these power supplies offer safe and dependable performance under demanding conditions.

- **Ruggedized for Harsh Environments**: Compliant with military standards, ***GROW CONTROL*** VIM are built to operate reliably in extreme environmental conditions.
- **Customer Support**: From customization and installation to support and maintenance, ***GROW CONTROL*** ensures seamless integration and optimal performance for all clients.

Technical Specification

Model no	GCPT403VIM
Power	40kW
Power Supply	415V, 3 ph, 50 Hz
Melt Capacity basis	Minimum 10 kg of Fe or equivalent 4.5 kg of Magnesium
Operating Temperature	1700℃ or higher
Working crucible	System will be compatible with a) MgO crucible b) Alumina crucible c) Graphite crucible
Safety controls	All the safety will be provided to prevent unprecedented damage
Cooling	Water Cooling

OUR CLIENTS

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