



**MANGAL**  
Electrical Industries Pvt. Ltd.  
Promoting Higher Values



**50** Years  
of Excellence



**MEIPL**

*“Lighting Up Lives.”*



## ABOUT MEIPL

MEIPL, established in 1990, is an ISO 9001:2015 certified company one of the pioneer in processing CRGO products and manufacturing transformers. Approved by Power Grid Corporation of India Limited for 400 kV Class Projects, MEIPL is a well-established brand in CRGO lamination, core assembly, core coil assembly, windings, amorphous cores, wound cores, and transformer's CRGO cores ( distribution transformers + power transformers ), serving the global industry for several decades.



***Our Logo***



***“ Lighting Up Lives. ”***

That's our motto. If you look more closely towards our logo, the sun is coming from the mountains and bringing life & energy to everybody's life. So that energy and vitality are what we want to get in everybody's life.

# Infrastructure

Spread across **1 Lakh Sq. Meters**, the seven state-of-the-art production facilities with **40,000 Metric Tons** capacity provide a livelihood to over 1000 people.





## History

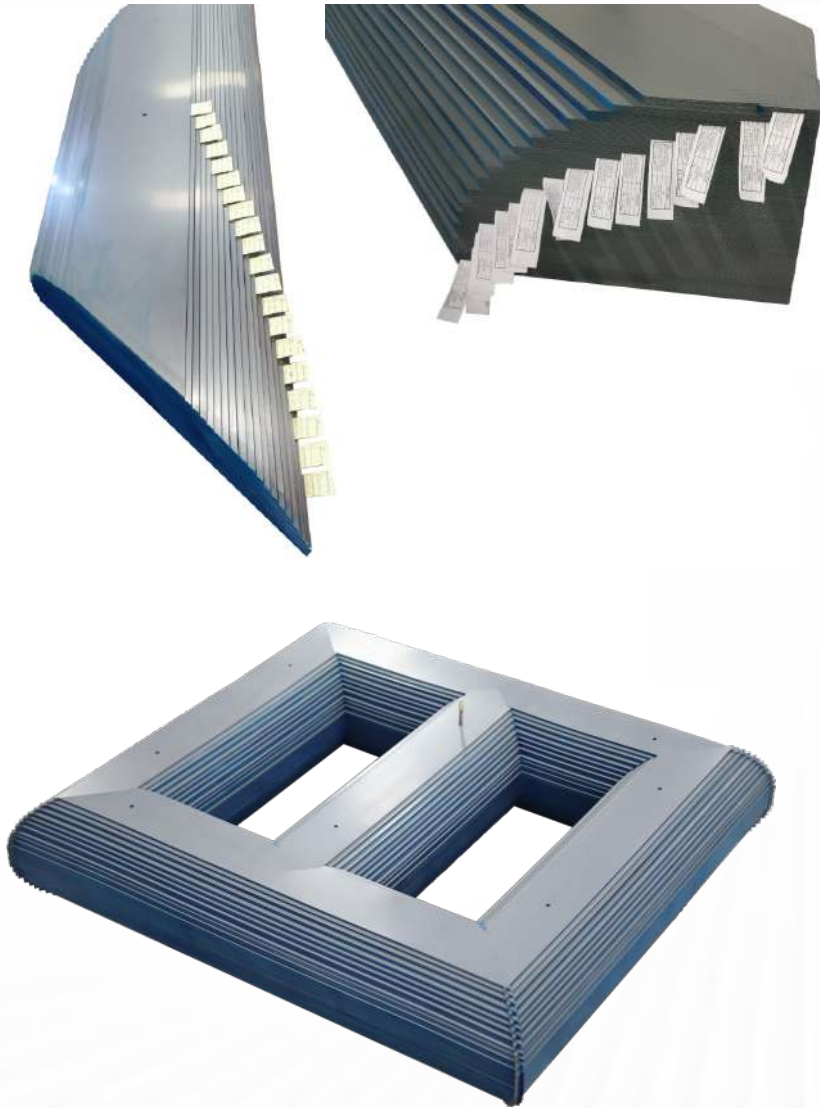
A transformation journey in the power transmission industry started 50 years ago with only 10 employees. Over the period, MEIPL has grown as a vast family of over 1000 members.

Our journey started with Transformer Lamination manufacturing. Today, we proudly stand as India's foremost CRGO Core Suppliers, offering a comprehensive range of products including CRGO Lamination, CRGO slit coil, Core assembly, Core coil assembly, Amorphous core, Wound core, I.C.B., Toroidal core, and more. This evolution reflects our commitment to excellence and innovation in serving the diverse needs of the electrical industry, cementing our position as a trusted partner for high-quality CRGO core solutions.



## CRGO Slit Coils

The primary and essential procedure for any cut lamination involves the slitting of Cold Rolled Grain-Oriented (CRGO) mother coils into various widths. Our facility is equipped to handle this crucial step, offering the capability to slit coils ranging from a minimum width of 40 mm to a maximum width of 1250 mm. This precision slitting process ensures that the CRGO material is tailored to meet the specific requirements of each lamination, whether for small-scale or large-scale transformer applications. By accommodating a wide range of widths, we can cater to diverse customer needs and produce lamination stacks optimized for efficiency and performance. Our commitment to quality and precision in the slitting process ensures that each cut lamination meets the highest standards of dimensional accuracy and consistency, laying the foundation for reliable and high-performance transformer components. We ensure slit edges burr less than 08 Microns ( $\mu$ )



## CRGO Cut Lamination

Utilizing our state-of-the-art Cut-to-Length (CTL) Machine equipped with advanced features such as V Notch and 2 Hole punch units, alongside 2 tip cut units, we specialize in precision cutting of CRGO Laminations for both Distribution and Power transformers. This advanced machinery enables us to efficiently produce a wide range of steplap CRGO cores, meeting the diverse requirements of transformer manufacturing. With the capability to accommodate various core designs and configurations, our cutting process ensures superior accuracy and consistency in lamination dimensions. By leveraging advanced technology and expertise, we deliver high-quality cut laminations that contribute to the optimal performance and efficiency of transformers across different voltage levels and applications.



# Core Assembly

The Core Assembly undergoes rigorous testing procedures to evaluate its no-load losses thoroughly. Simultaneously, each assembly is meticulously packed with utmost care, ensuring its protection during transportation and handling. Once packed, the assemblies are prepared for the insertion of both Low Voltage (LV) and High Voltage (HV) coils, marking a critical stage in the manufacturing process. This meticulous attention to detail not only safeguards the integrity of the core assemblies but also streamlines the subsequent coil insertion process. By prioritizing quality assurance measures and careful handling, we ensure that our core assemblies meet the highest standards of reliability and performance, ready to fulfill their essential role in various electrical applications with efficiency and precision.



**We guarantee  
No LOAD LOSS.**



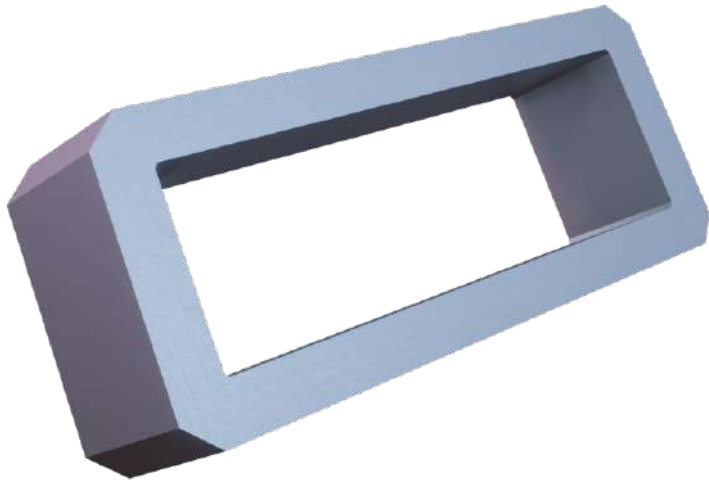


## Core Coil Assembly

We specialize in producing comprehensive CRGO Core Assemblies tailored for both Distribution and Power transformers, accommodating capacities of up to 10 MVA. Our expertise extends across the entire spectrum of core assembly production, from design and fabrication to assembly and testing. With meticulous attention to detail and adherence to industry standards, we ensure that each core assembly meets the stringent requirements of transformer applications, delivering optimal performance and reliability. Whether for distribution networks or power transmission systems, our core assemblies are engineered to withstand the demands of high-voltage environments while optimizing energy efficiency and minimizing losses. By offering complete solutions for magnetic core assemblies, we provide our customers with the assurance of quality, durability, and performance, essential for the seamless operation of transformers across various applications and industries.

## Amorphous Core

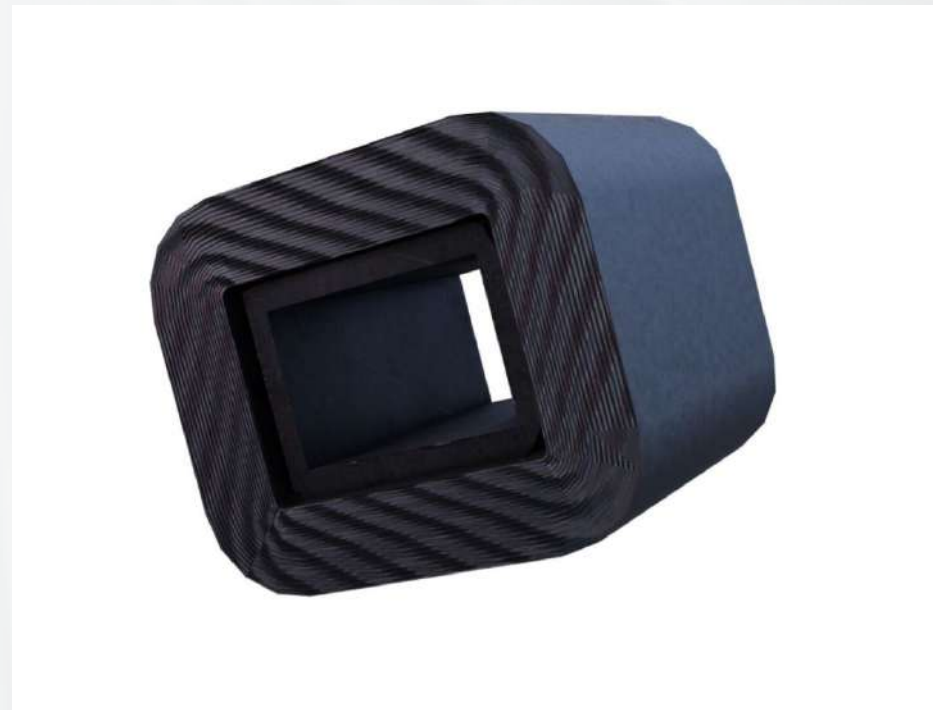
The eddy current losses experience a notable decrease attributed to the thin 0.03 mm thickness of the Amorphous core. This reduction significantly diminishes the no-load losses to approximately one-fifth of those observed with silicon steel cores. This decrease in eddy current losses is a direct result of the unique properties of Amorphous core materials, which exhibit minimal magnetic hysteresis and reduced electrical conductivity. By leveraging the ultra-thin profile of the Amorphous core, electromagnetic induction is effectively minimized, resulting in substantially lower energy losses during operation. Consequently, this enhancement in efficiency translates into reduced power consumption and improved overall performance in various electrical applications, contributing to energy conservation efforts and operational cost savings.



# Wound Core

Manufactured from carefully selected coils of Cold Rolled Grain-Oriented (CRGO) electrical steel, wound cores are engineered to exhibit tightly controlled electromagnetic properties and dimensional accuracy, crucial for their application in transformers and other electrical devices. CRGO steel is preferred for its superior magnetic characteristics, which minimize energy losses and enhance overall efficiency.

To ensure optimal performance, wound cores undergo a stress-relief annealing process, which restores their magnetic properties after the manufacturing process. This annealing process is essential for relieving internal stresses within the steel, thereby enhancing its magnetic permeability and reducing hysteresis losses. As a result, the cores exhibit consistent and reliable magnetic behavior, contributing to the efficiency and longevity of electrical equipment.



# World Class Quality Testing Lab Setup



BROCKHAUS MESSTECHNIK

Germany

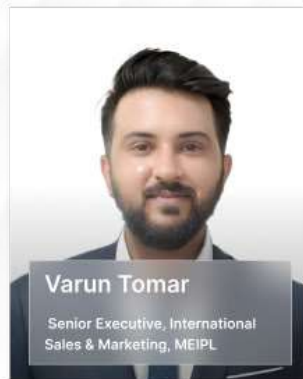
MEIPL Brockhaus lab is equipped to carry all electrical testing of CRGO Products as per ISO 3024: 2015.

# Key Features

- Our CNC Cut to Length machines are able to process lamination in various shapes and sizes with **45 Degree / 90 Degree / 135 Degree angle cutting.**
- Core building and core coil assembly **upto 20MVA capacity.**
- MEIPL guarantee a maximum 8-micron burr by slitting the coils in our new CNC Slitting line MEIPL have the facility to slit a minimum range from **40 mm - 1250 mm .**
- Brockhaus test lab setup for complete CRGO Test. SST, Epstein, Franklin, Stacking factor, Bend test, Ageing Test
- We cut CRGO lamination for distribution transformers (10kVA) to Large Power Transformers up to (1200 kV Class) with advanced CTL Machine having **V Notch and 2 Hole punch units and 2 tip cut units.** By these advanced technology machinery we can cut all types of step lap magnetic cores.
- MEIPL has modern facility plant which can meet today's requirement of **Horizontal & Vertical Step Lap** | Conventional Designs | Reactor Core PT Lamination.
- The Toroidal Cores manufactured at Mangal have four unique qualities: High Strength, Compact Design, **Corrosion resistance and Highly Durable.**
- Mangal Electrical produces high quality amorphous distributed gap (wound) cores according to Customer specification for single phase and three phase distribution transformer applications By using Metglas amorphous metal.
- We can process CRGO Cut lamination **up to 1200 KV class.**
- Get ready to trust us even more as we strive towards NABL certification!

# Our Team

Our philosophy is simple – hire a team of diverse, passionate people and foster a culture that empowers you to do your best work.



# Countries We Are Exporting



## Quality Approvals





---

## ***Mangal Electrical Industries Private Limited***

---

### **REACH US**

Ph: +91 92651 44007 | +91 90571 00200 |  
+91-141-2332388, 2262589 | +91-7710808972

Mail: [crgo.export@mangals.com](mailto:crgo.export@mangals.com) | [sales@mangals.com](mailto:sales@mangals.com) |  
[marketing@mangals.com](mailto:marketing@mangals.com) | [gauravbhatt@mangals.com](mailto:gauravbhatt@mangals.com)

