



**MGM**  
TRANSFORMERS  
BY FORGENT

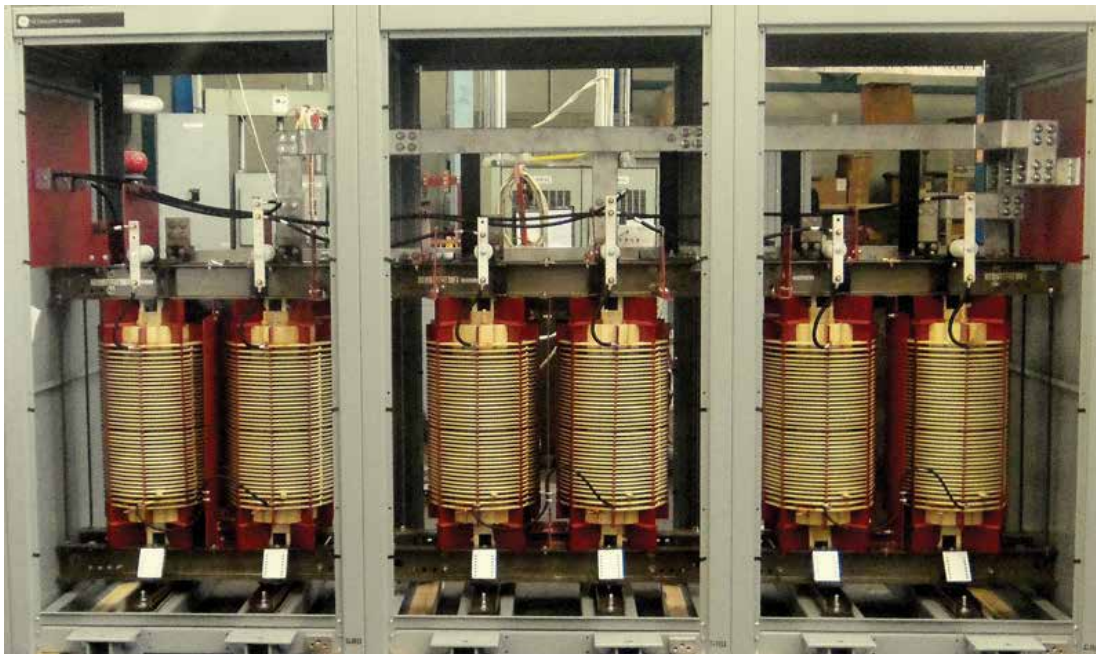
(323) 726-0888 • (800) 423-4366 • [www.mgmtransformers.com](http://www.mgmtransformers.com)

## **SPECIALTY PRODUCT BROCHURE**

### **MGM Transformers Overview**

With over forty years of transformer experience and our long standing commitment to quality and customer service, MGM Transformers will design and build the transformer that is right for your specific application.

MGM provides custom built dry transformers for Triplex application, designed by industry leading, experienced engineers for the unique requirements of Traction duty transformers. Our people, knowledge, and experience can provide a reliable, cost-effective transformer that will provide years of trouble free service.



### **Application**

A triplex transformer is composed of three separate single phase transformers which are banked and connected directly together to form a single three phase unit in a common enclosure. While slightly larger than a dedicated three phase unit a triplex design can be broken down into three significantly smaller and lighter components when there are size and/or weight restrictions for transporting the transformer. These are often used in mining or high rise building installations where the unit must be transported in an elevator.

**TRIPLEX TRANSFORMER**

## **Advantages with MGM**

A highly experienced and trained engineering staff (ALL IN-HOUSE) for the design and manufacturing of standard and highly specialized products.

- Product offerings in both dry type and liquid filled to meet your specific demands.
- 220°C Nomex insulation for Dry-Type Transformers
- Self-Cooled or Forced Air Cooled
- Low Voltage and Medium Voltage solutions.
- All processes done in-house at our own UL, CUL, CSA and ISO 9001-2015 certified facilities.
- Shortest lead times in the industry.
- Every process is done under roof.

### **Our Capabilities:**

- 10 KVA – 5 MVA, single phase transformers
- 10 KVA – 10 MVA, three-phase transformers
- 120 volt – 34,500 volt range
- 10 KV – 250 KV Basic Impulse Level (BIL)

### **Features:**

Whether it is a Unit Substation or a standalone transformer, MGM has a solution for those hard to reach indoor installation locations. MGM's Triplex Indoor VPI Transformers can help reduce or eliminate unnecessary site tear down and reconstruction to be able to fit a standard design transformer, thus reducing installation costs amounting to thousands of dollars.

MGM's Triplex Indoor VPI Transformers uses single-phase VPI transformer modules in a banked assembly. They can be customized to suit your application requirements and solve the challenges of hard to reach at indoor installation locations. The core and coil construction utilizes the same proven methods as our standard three-phase transformers. All units are factory pre-assembled and tested to guarantee proper fit and performance, and then they are disassembled for shipment.

Our enclosures can be knocked down to further facilitate movement and allow them to fit through tighter spaces and areas with limited entry points. With MGM's Triplex Indoor VPI Transformers there is no concern of liquid spills or need to build special liquid containments and/or vault type electrical rooms.

## **Testing**

MGM Transformer tests every transformer to satisfy the requirements of IEEE 1653.1. Our testing equipment ensures the highest quality transformers that meet all IEEE, and NEMA standards. We also offer customer witness testing on individual transformers and we have the capability of providing a range of design tests and optional tests such as impulse, partial discharge,

temperature rise, sound level, and others.

The following tests will be conducted on the unit:

1. Winding resistance: Resistance of each Primary and Secondary windings shall be measured with digital micro ohmmeter.
2. Turn Ratio: The transformer shall be tested for turn ratio of each coil's primary to secondary turns on all the taps connections by transformer turn Ratio Bridge.
3. Polarity and phase relation test: The polarity / phase relation shall be checked simultaneously with the turn ratio test.
4. No load losses and Exciting current: This shall be tested at 100% rated voltage and at other specified voltage(s) at rated taps connection using digital or analog meters. The measurements will be made at the Primary or secondary terminals with other winding(s) open circuited.
5. Impedance and Load loss test: The voltage required to circulate the rated current under short-circuit conditions when connected on the rated voltage tap, is the **impedance** voltage. The **impedance** voltage and **load loss** is **measured**.
6. Applied potential test: The test shall be done at 60 Hz. Applicable test voltage shall be applied on each primary and secondary windings in turn with all other windings and parts connected to ground and the return circuit of the test transformer. Duration of the test shall be 1 minute.
7. Induced potential test: The test shall be conducted at 400 Hz for 18 seconds. Twice the rated voltage shall be applied at the lower voltage winding with other winding(s) open circuited.

MGM can also perform additional tests at cost such as Impulse test, Temperature rise test, Audible Sound Level Test and Partial Discharge Test

### **THE BETTER CHOICE!**

MGM is a leader in the transformer industry and a premiere manufacturer capable of fulfilling the most demanding applications. **No one can provide a wider range of products and solutions than MGM!**