

MGM



TRANSFORMER COMPANY

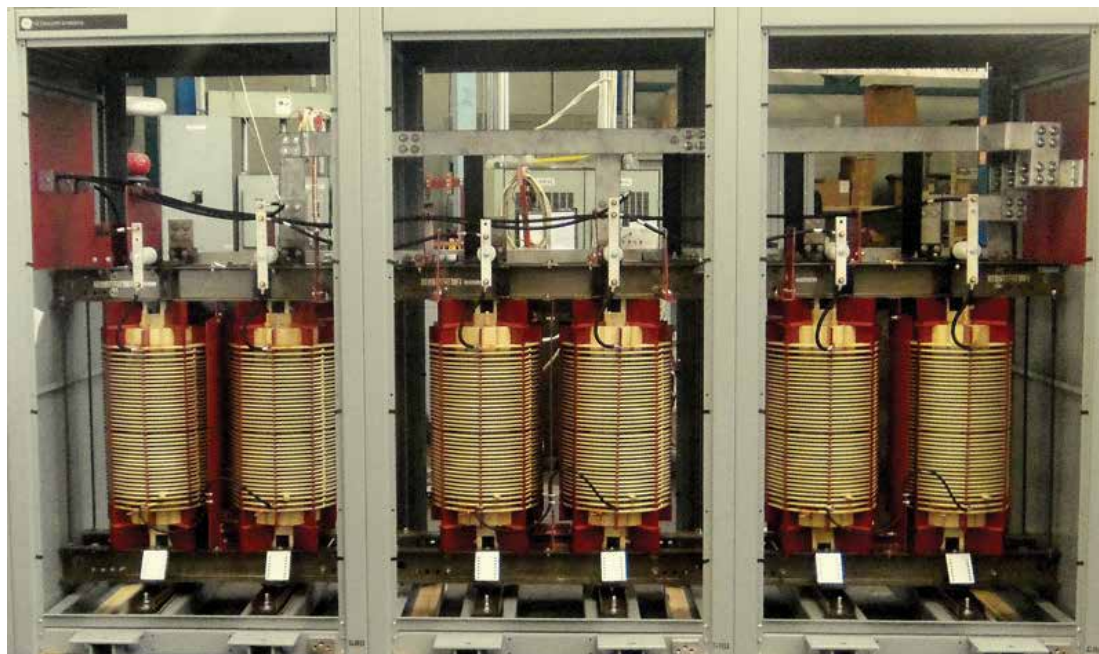
(323) 726-0888 • (800) 423-4366 • www.mgmtransformer.com

SPECIALTY PRODUCT BROCHURE

MGM Transformer Company Overview

With over forty years of transformer experience and our long standing commitment to quality and customer service, MGM Transformer 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!**

MGM Transformer Company - Product Catalogs

MGM TRANSFORMER COMPANY

ISO 9001 CERTIFIED

Special Design Dry Type Transformers
Liquid Filled and Dry Type Substation Transformers
Liquid Filled and Dry Type Drives Isolation Transformers
600V Class General Purpose Transformers
Low Voltage Custom Transformers

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600 V Class, Dry Type, General Purpose Distribution Transformers

BULLETIN 10

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Custom 600 V Class, Dry Type General Purpose Distribution Transformers

BULLETIN 15

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Dry Type Substation Transformers

BULLETIN 30

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Liquid-Filled Secondary Substation Transformers

BULLETIN 40

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

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

Application

As explained by the figure, an auto transformer has the ability to supply a varying secondary voltage to the externally connected load. So this is mostly used in applications where various voltage outputs are required. Some of its applications are listed below:

- It is used in electronic testing centers where continuously varying voltage supplies are required.
- At places the power stations which need to step down the voltage, then increase it to match the voltage required by the device at the receiving end.
- For motor starting applications.

AUTO TRANSFORMER

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MGM provides custom built dry type transformers for the Electric Vehicle (EV) charging industry, designed by industry leading, experienced engineers for the unique requirements of EV charging stations. Our people, knowledge, and experience can provide a reliable, cost-effective transformer that will provide years of trouble free service.

Application

There is no doubt that the trend towards EV's here to stay. Motorists who purchase such a vehicle also need a charging station. The total number of electrically powered cars worldwide reached some 3.2 million in early 2012. That's a 55% increase over the previous year. The figure includes all the vehicles charged with electricity, such as plug-in hybrids.

ELECTRIC VEHICLE CHARGING

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MGM provides custom built dry and or liquid filled grounding transformers designed by industry leading, experienced engineers for the unique requirements of this specialty transformer. Our people, knowledge, and experience can provide a reliable, cost-effective transformer that will provide years of trouble free service.

Purpose

Simply put, a grounding transformer is used to provide a ground path to either an ungrounded "Y" or a delta connected system and is used to:—

- Provide a relatively low impedance path to ground, thereby maintaining the system neutral at or near ground potential.
- Limit the magnitude of transient over voltages when re-energizing ground faults occur.
- Provide a source of ground fault current during line to ground faults.
- Permit the correction of phase to neutral faults if desired.

If a single line to ground fault occurs on an ungrounded or isolated system, no return path exists for the fault current, thus no current flows. The system will continue to operate but the other two un-faulted lines will rise in voltage by the square root of 3 resulting in overvoltage of the transformer insulation, and other associated components on the system, by 173%.

GROUNDING TRANSFORMER

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

MGM provides custom built dry and or liquid filled transformers for the Traction industry, 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

Traction used transformers are critical components in the traction chain, affecting both train performance and operator services. MGM supplies traction substation transformers for all applications.

- High speed, commuter and regional trains.
- Transit/Traction - In general, electricity is distributed along tracks as DC current. Converted to AC to train to drive motors. 500VDC - 1500VDC is typical range.

These transformers are typically located in either indoor or outdoor traction substations.

TRACTION DUTY

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MGM provides custom built dry transformers for Triplex applications, 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

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

MGM provides custom built dry and or liquid filled high rise transformers designed by industry leading, experienced engineers for the unique requirements of this specialty transformer. Our people, knowledge, and experience can provide a reliable, cost-effective transformer that will provide years of trouble free service.

HIGH RISE TRANSFORMER

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MGM provides custom built dry and or liquid filled transformers specifically for the mining industry, designed by industry leading experienced engineers for the unique requirements of mine duty transformers. Our knowledgeable staff, manufacturing standards and experience will provide a reliable, cost-effective transformer that will provide years of trouble free service.

Application

The mining industry requires many different types of Power Transformers, the need for high power in a compact robust transformer make these units unique to the industry. Examples include:

- Above/Below Ground Application
- Headage Equipment
- Mining Distribution
- Low Profile Power Centers
- Multiple Input and/or Output Voltages
- Power Distribution
- Continuous Miners
- Low Profile Mining Transformers
- Longlead Transformers
- Special Environmental

MINING TRANSFORMER

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