

(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 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 rated 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 track as DC current. Converted to AC on trains to drive motors. 500VDC 1500VDC is typical range.

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

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
- Dry type or Liquid filled
- 10 KVA 10 MVA, three-phase transformers
- 120 volt 34,500 volt range
- 10 KV 250 KV Basic Impulse Level (BIL)

Features

- Compliance with IEEE 1653.1-2017
- Typically Traction transformers experience a high number of short circuits while in operations and transformers may be exposed to 10-20 times their rated current.
- Traction- Typically the temperature rise is determined by the transformer overload rating defined in IEEE P1653.2. Overloads are chosen to allow trains to function at peak passenger loads with failed substations in the system.
- 1. Light Traction duty (150% for 2 hrs.)
 - 100 % rated load cycle of the rectifier current in ampere continuously followed by either
 - 150 % of rated load cycle of the rectifier current in ampere for 2 hours or
 - 200% of rated load cycle of the rectifier current in ampere for 1 minute following 100% rated load
- 2. Heavy Traction duty (150% for 2hrs)
 - 100% rated load cycle of the rectifier current in ampere continuously followed by either.
 - 150% of rated load cycle of the rectifier current in ampere for 2 hours or
 - 300% of rated load cycle of the rectifier current in ampere for 1 minute following 100% rated load
- 3. Extra-Heavy Traction duty (162 % rms for 2 hours)
 - 100 % rated load cycle of the rectifier current in ampere continuously followed by

- 150% of rated load cycle of the rectifier current in ampere for 2 hours followed by
- 300% of rated load cycle of the rectifier current in ampere for 5 equally spaced periods, each 1 minute
- Followed by final 450% of rated load cycle of the rectifier current for 15 seconds.

Testing and Quality Control

MGM Transformer tests every Traction 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.

Tests specific to Traction include:

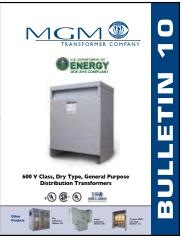
- Commutating Impedance.
- Losses- Guaranteed losses are based only on sinusoidal rated transformer current (no harmonics). Many rectifier types have special measurement procedure as per C57.18.10.
- Thermal Tests- Measured with losses equal to sinusoidal current losses corrected (increased) for harmonic load currents.

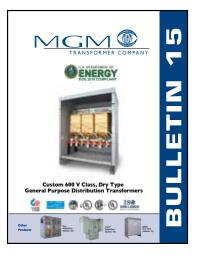
THE BETTER CHOICE!

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

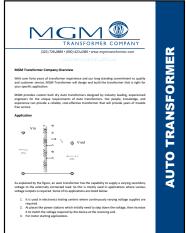


























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