TIERNEY
Electrical Manufacturing Co.

TRANSFORMER PRODUCT LINE OVERVIEW

Single Phase ¼ - 10 KVA

- Copper-wound industrial grade
- 115° C. rise design with Class 180 insulation system. 80° C. rise design available.
- Wall mounting indoor enclosure
- U.L. Listed

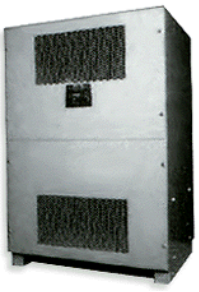
Single Phase 15-100 KVA and Three Phase 11-1500 KVA

- Copper-wound industrial grade
- 150° C. rise with Class 220 insulation system. 115° C. and 80° C. rise design available
- Equipped with built-in vibration isolators between enclosure and core and coil unit
- Indoor floor mounting enclosure
- outdoor 3 R Tamper-proof padmount enclosure available (shown at left)
- U.L. Listed

Single Phase 15 - 100 KVA and Three Phase 11 - 75 KVA

- Copper-wound industrial grade.
- 150° C. rise design with Class 220 insulation system. 115° C. and 80° C. rise design available.
- Floor mounting indoor enclosure. Some may be wall-mounted with accessory wall brackets.
- Equipped with Built-In Vibration Isolators between enclosure and core and coil unit.
- Outdoor 3 R Tamper-proof Padmount enclosure available.
- U.L. Listed

Three Phase 112 1/2 - 1500 KVA



- Copper-wound industrial grade
- 150° C. rise with Class 220 insulation system. 115° C. and 80° C. rise design available
- Indoor floor mounting enclosure
- Equipped with built-in vibration isolators between enclosure and core and coil unit
- Outdoor 3 R Tamper-proof Padmount Enclosure available
- U.L. Listed

7901 7th Ave. South, P.O. Box 80765, Seattle, WA 98108
TEL 206·767·3554 FAX 206·762·5867
EMAIL • sales@tierneytransformer.com

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Single Phase 15 KVA - 1000 KVA and Three Phase 15 KVA - 3000 KVA

- Copper-wound Industrial Grade
- 150 Degree C. Rise Design with Class 220 Insulation System
- 115° C. and 80° C. Rise Designs with Class 220 Insulation System Available
- 5 KV/8.7 KV/15 KV Voltage Class Ratings Available
- Indoor floor Mounting Indoor Enclosure
- Outdoor 3 R Tamper-proof padmount enclosure available.
- Core and Coil Only Units are Available
- Equipped with Built-in Vibration Isolators Between the Enclosure and Core and Coil Unit
- Terminators are Rigid Copper Bus
- U.L. Listed

K-Factor Type Harmonic Load Compensated Three Phase 11 - 150 KVA

- Copper-wound industrial grade
- K-13, K-20 & K-50 Ratings
- 150° C. rise with Class 220 insulation system. 115° C. and 80° C. rise design available
- Indoor floor mounting enclosure,some may be wall mounted with accessory wall brackets.
- Equipped with Built-In Vibration Isolators between enclosure and core and coil unit.
- Outdoor 3 R Tamper-proof Padmount Enclosure available
- 3X Oversized Neutral
- Low voltage surge protection
- Electrostatic "Box" Shielded
- U.L. Listed

MTC Machine-Tool Control Transformers

- **Superior Design --** Excellent regulation results from low-impedance design and interleaved windings. Voltage drop on inductive circuit inrushes is limited to values well below those recommended by NEMA and ANSI.
- **Dependable Workmanship --** Each transformer is individually hand-wound and hand-assembled by expert craftsmen.. not by automated machines which cannot see defects or spot irregularities which may later be the source of trouble after transformer installation.
- **Compact Size --** Smallest physical size consistent with conservative design requires minimum space in cabinets or on control panels or machines.

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Tierney "Capacitran" Transformers

What "Capacitrans" Are:

Built-in overload capacity PLUS --that's the Tierney "Capacitran"! The "Capacitran" series of dry-type transformers employs 80° C. rise core-and-coil design and Class 220 insulation.

What "Capacitrans" Can Do For You:

Many engineers, maintenance workers and contractors with an eye to the future know that electrical loads are on the increase, and that they will probably continue to rise through the years. Transformers adequately sized for today's loads may be marginal in KVA capacity a year from now.

Another electrical fact of life is that dry-type transformers in many applications today normally carry only moderate loads, but are occasionally called upon to bear large overloads for periods of up to several hours.

Prior to the Tierney "Capacitran," designers had to oversize dry-type transformers up to 50% to allow for the occasional long-term overload expected.

The "Capacitran" line enables an engineer or designer to size dry-type transformers in the normal manner, allowing for the expected diversity factor of the load. When using a Tierney "Capacitran" he can rest assured that its inherent overload capacity will easily carry a continuous 30% overload when using Class 220 insulation.

General Information About "Capacitrans:"

This transformer is designed to attain a temperature rise of not greater than 80° C. over 40° C. ambient when operating at its rated KVA capacity.

The use of Class 220 insulating materials in the same transformer would allow the transformer to produce a temperature rise of up to 150° C. over a 40° C. ambient before any danger to the insulation would be encountered.

This is the principle of the Tierney "Capacitran." The 80 degrees C. rise design core and coil unit, rated at a specified KVA capacity when used with Class 220 insulation, actually GAINS about 30% more continuous KVA capacity.

How to Specify Tierney "Capacitrans:"

Dry-type transformers shall be Tierney Electrical Mfg. Co. "Capacitran" series using maximum 80° C. rise design and Class 220 insulating materials, giving a guaranteed built-in continuous overload capacity of 30%.

SUFFIX H80

Core and Coil Design 80 (degrees) C.

Insulation Materials Class 220

Continuous Overload Capacity 30%

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Tierney "Quietran" Transformers

What "Quietrans" Are:

"Quietrans" are a high-quality line of dry-type transformers with consistently-low inherent sound levels. Before shipment from the factory, each transformer in the "Quietran" line is individually tested using ANSI Standard test procedures, and is guaranteed to have a maximum inherent sound level of 35dB. This ANSI guaranteed maximum figure ranges from 12% to 36% BELOW the current ANSI Standard sound levels.

Where to Use "Quietrans:"

In hospitals, schools, quiet offices, or in any other low-ambient sound-level locations where the inherent "hum" of transformers would be annoying to personnel.

General Information about "Quietrans:"

Below are tabulated various 600 V. class dry-type transformer sound levels for convenient comparison:

Transformer Rating	ANSI C89 Standard	Present Industry Standard	Tierney "Quietran"
0-9 KVA	40 dB	40 dB	35 dB
10-50 KVA	45 dB	45 dB	35 dB
51-150 KVA	50 dB	50 dB	35 dB
151-300 KVA	55 dB	55 dB	35 dB

What "Quietrans" Can Do For You:

Because of their extremely-low sound-level performance, "Quietrans" enable you to place dry-type transformers nearer to the center of load, reducing voltage drop, and virtually eliminate the need for "hiding" noisy transformers in janitor's closets, storage rooms, etc.

How to Specify Tierney "Quietrans:"

Dry-Type transformers rated 300KVA and below shall be Tierney Electrical Mfg. Co. "Quietran" series, with a guaranteed maximum sound-level of 35 dB. Certified copies of factory sound-level test reports covering each transformer intended for use on this project shall be provided to the Architect or Engineer.

Add Suffix "QT" to catalog number for "Quietran" feature.

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Tierney "Corrositran" Transformers

What "Corrositrans" Are:

The Tierney "Corrositran" line of dry-type transformers embodies heavy-duty industrial-type construction along with a high degree of anti-corrosion protection designed to add years of life to dry-type transformers installed in corrosive atmospheres.

Where to Use "Corrositran:"

"Corrositrans" are ideally suited for both indoor and outdoor use in such locations as pulp mills, paper mills, dairies, on docks and piers over salt water -- anywhere, in fact, where extremely-moist or highly-corrosive conditions prevail.

Before Tierney "Corrositrans," these conditions often meant that the life of dry-type transformers might be shortened as much as 50%.

General Information About "Corrositrans:"

From the double-thick layer of tough insulating varnish on its core and coil to the green urethane or epoxy finish on the enclosure, the "Corrositran" is built to withstand severe attacks by corrosive elements. All of the hardware on "Corrositran" units are stainless steel to fight corrosion.

Because of the extra built-in protection, transformers in the "Corrositran" line can rely on the time-proven "chimney effect" of the circulation of cooling air around and through the core-and-coil assembly. Other transformers without this internal protection must depend on a completely-enclosed design which relies solely on radiation from the case for dissipation of heat. However, during heating and cooling periods, these so-called completely-sealed designs will "breathe," drawing some of the contaminated air inside the enclosure, where it is free to attack the insulation system.

What "Corrositrans" Can Do For You:

With Tierney "Corrositrans" you can now place dry-type transformers nearer than ever before to the center of loads outdoors or in moist or corrosive environments. You no longer need to take up valuable wall or floor space for transformers in clean, dry areas to save loads in problem areas.

How to Specify Tierney "Corrositrans:"

Dry-type transformers shall be Tierney Electrical Mfg. Co. "corrositran" series, with internal and external corrosion protection.

Add Suffix "COT" to catalog number for "Corrositran" feature.

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