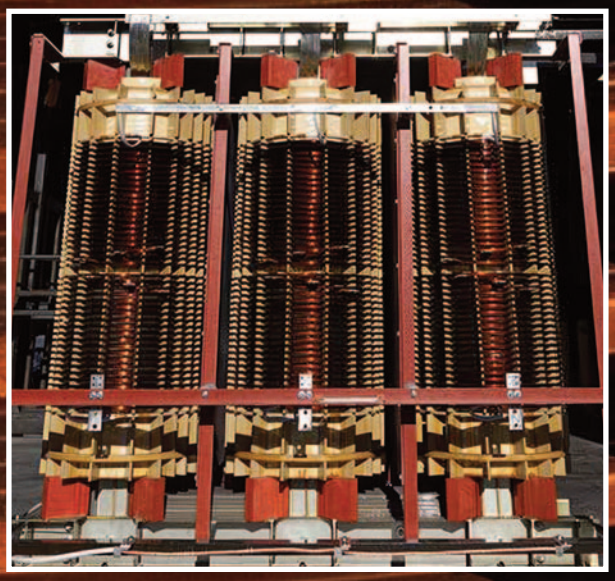
WR Transformers



CORE & COIL

NEMA 1 & 3R ENCLOSURES

Dry-Type Transformers
Designed & Manufactured
in the United Sates
& Canada

wrxfo.com

855-294-1559

WR Transformers

Since 2013, WR Transformers has been a top North American manufacturer of high-performance dry-type electrical transformers. With more than 9,000 units installed globally, our transformers support critical operations across a wide range of industries that depend on reliable power transformation systems.

Major data centers need reliable power solutions to run 24/7/365.

WR bridges the gap between the grid and servers with turnkey dry-type transformer solutions.

An off-grid mine needed mobile electrical dry-type transformers to power its equipment.

WR provided a custom solution to keep them mining in an extremely harsh environment.

When high power usage operations, such as aluminum smelters or heavy-industrial facilities, need consistent power with no interruption, they depend on WR Transformers!

Transformer Product Overview

WR offers a comprehensive portfolio of low- to medium-voltage dry-type transformers, with voltages up to 49kV and insulation classes up to 220kV BIL with a power rating range from 5kVA to 20MVA.

Our Markets

- Mining
- Oil & Gas
- Data Centers
- Tunneling
- Utilities
- Smelters & Metal Refining
- MV Switchgear

" High-quality, experienced product craftsmanship and outstanding customer service from design to delivery is what you can expect as our customer."

- Christian Roberge
President

WR Transformers

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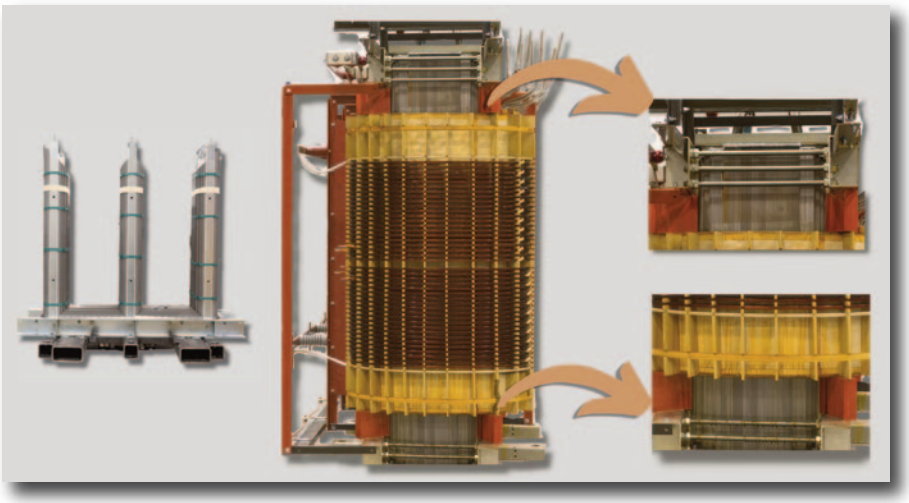
Core Construction

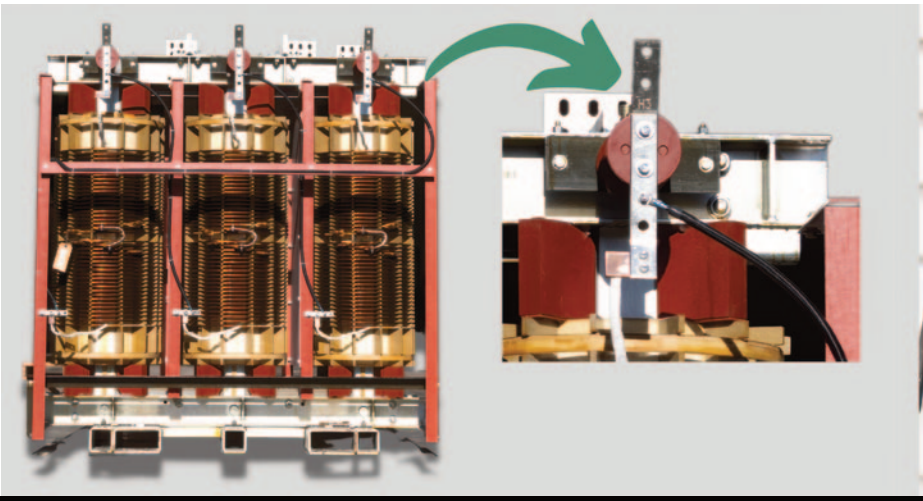
WR's cores are constructed of high-quality grain-oriented steel with high magnetic permeability. Magnetic steel is prepared free of burrs and appropriately stacked. Magnetic flux density is kept below the saturation point, which minimizes core losses and reduces the sound level. The core is electrically insulated except for one point, where a copper strip connects the core to the yoke. The steel cutting is done with high precision, and then the core is vacuum impregnated with resin to help prevent corrosion. For larger capacity transformers and to avoid saturation, an air gap in the middle of the core uses electrical insulation so that air can freely circulate and cool it.



Core & Coil Assembly

WR's cores are compressed by high-density insulation blocks between the upper and lower frames to help withstand short-circuit forces. The transformers used in the mining sector are mechanically reinforced to handle being oriented at 90°. The standard connection type is "stub up," utilizing NEMA-type holes with or without mechanical connectors. WR also offers the possibility of manufacturing and installing busbars to coordinate with low voltage (LV) and/or high voltage (HV) switches. This service is also available for adding Transition Chambers or an ATC Air Terminal Chamber.

As an option, the addition of flexible braids eliminates vibration transmission from the transformer to the switching devices. They can be factory installed and ready for connection at the job site.



Data Centers

Medium-Voltage VPI
5kV, 35kV & 46kV Class
Transformers

WR Transformers

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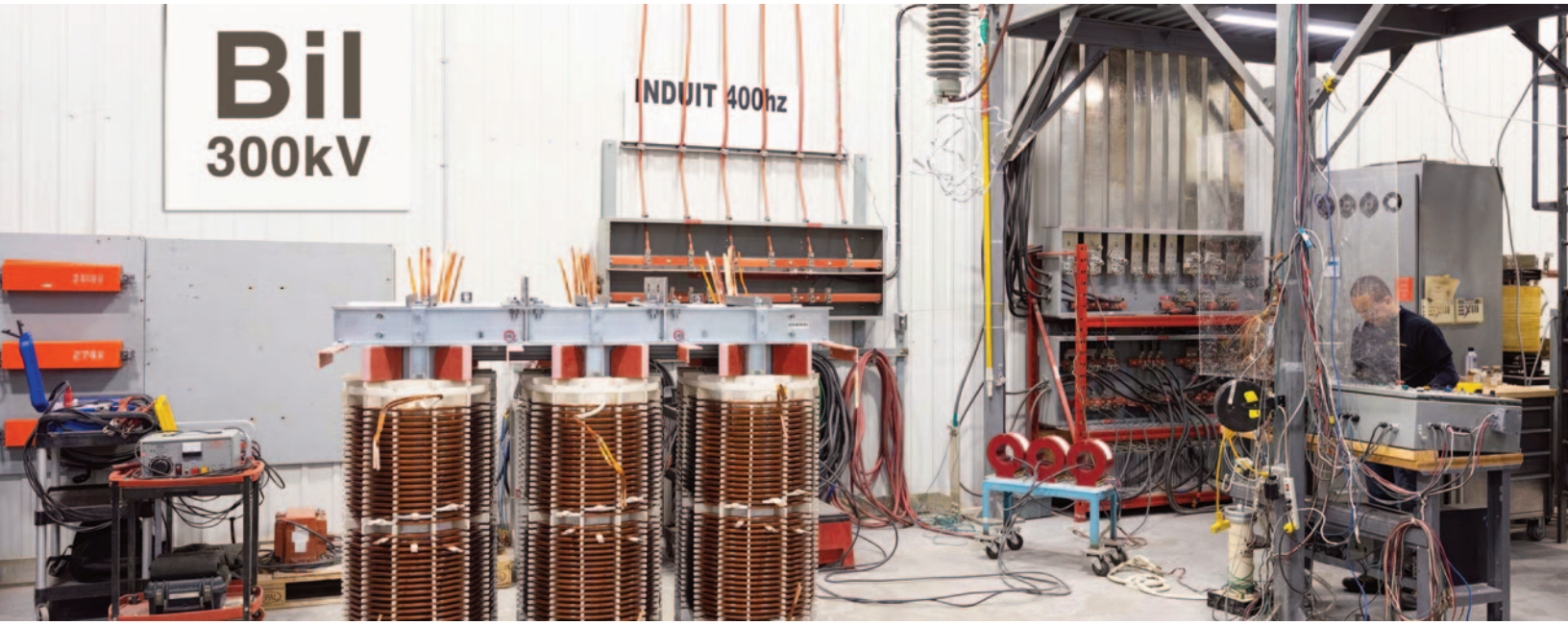
WR Transformers

ISO/IEC 17025-Certified Testing Labs

Before shipping, all WR Transformers are completely tested in-house by our technical team to this North American standard:

IEEE C57.12.91-2011: Test Code for Dry-Type Distribution and Power Transformer



Standard Testing

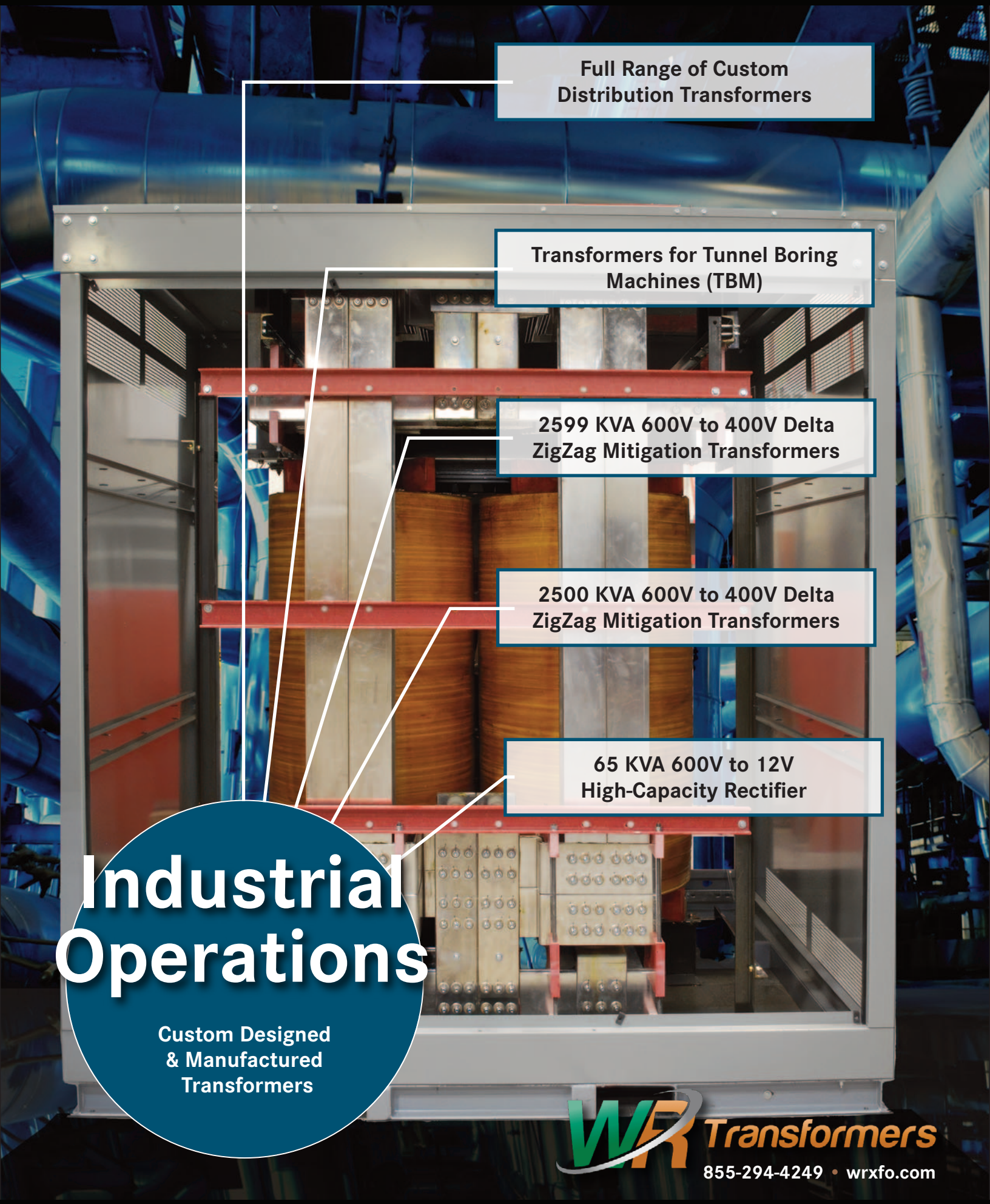
- Dielectric (Hipot & Induce)
- No load loss and excitation current test
- Polarity
- Ratio
- Resistance
- Load loss & impedance

ISO 17025

Optional Testing:

- Heat run test
- BIL
- Partial discharge (Corona)
- Sound level

LISTED



Industrial Operations

Custom Designed & Manufactured Transformers

WR Transformers

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WR Transformers

Enclosures

Mechanical housings are either **NEMA 1** or **NEMA 3R** type. These housings can have filters added to better protect the transformer from dust, water or snow. For greater strength and longevity, the enclosure can be manufactured with a range of thicknesses such as 11, 12 and 14 gauge.

We also provide stainless steel enclosures for highly corrosive conditions, such as salt air. For mining operations, these transformers can be mounted on a stable metal base, making them easier to move and reducing the amount of work needed when connecting them to the control panel. For extremely harsh weather conditions, we offer a housing that has no ventilation.

Transition Chambers

To facilitate the electrical interface between high voltage (HV) and low voltage (LV) cables, a specially designed transition chamber can be incorporated to provide a protected space to connect incoming and outgoing cables. This space separates the HV and LV into compartments to help prevent electrical interference or faults, and ensures organized, safe and strain-relieved cable connections. To make sure the cables are securely installed, cable supports can be added.


7.5 MVA 25kV to 7.2 kV NEMA 3R
Portable Trailer Mount
1250 KVA 13800 & 4160
to 600V & 208V
25 KVA 24940 to 120/240V
1 Phases
Mining
Operations
Custom Designed
& Manufactured
Portable or Static
Transformers
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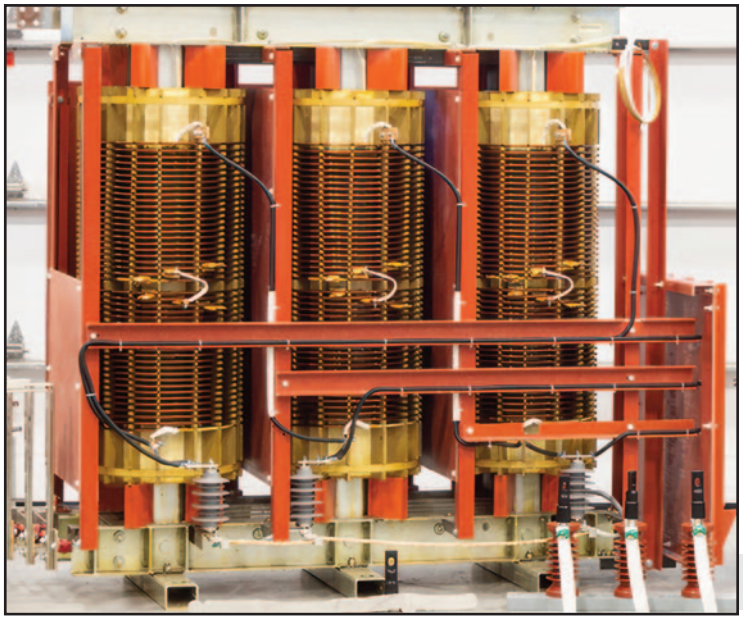
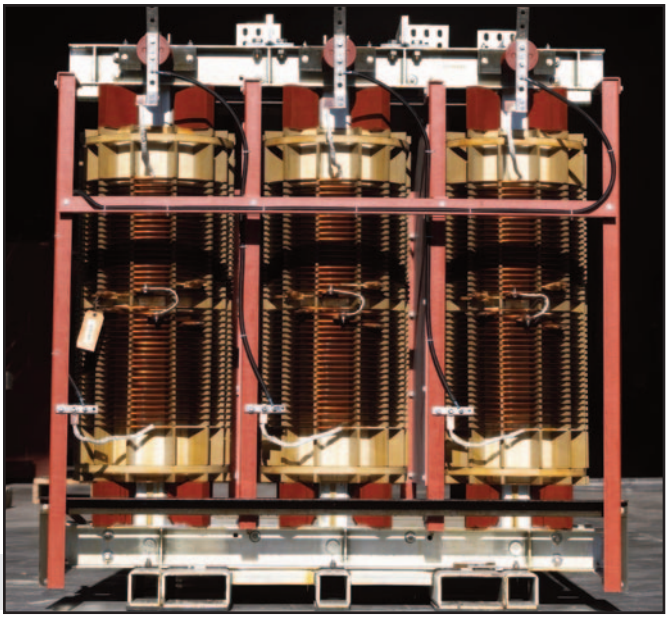
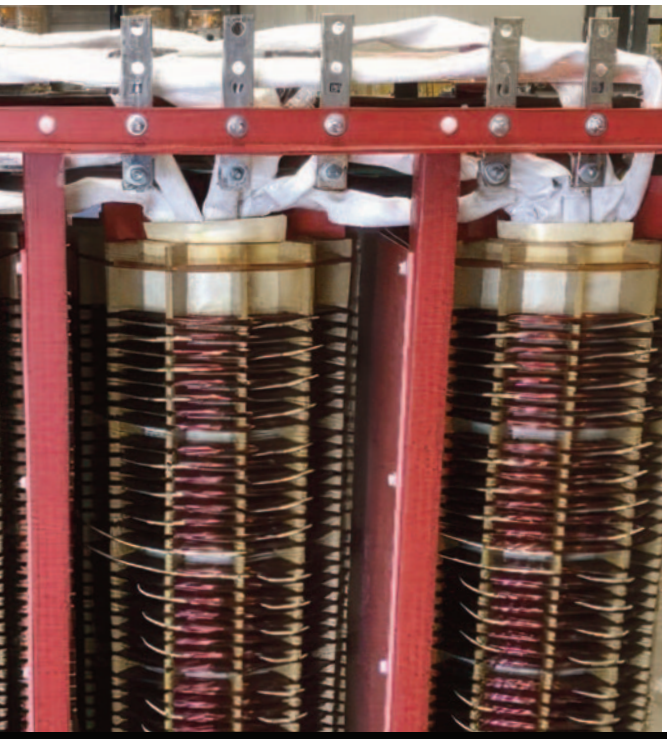
WR Transformers

Windings

Copper or aluminum coils are vacuum-impregnated (VPI) with polyester resin, which seals out moisture from the windings and insulation and ensures reliable, longer lasting performance in harsh environments. The plug adjustments, located at the front, are easily accessible. Windings are made in layers or discs depending on the voltage level and the insulation class (BIL). For some applications, the strip foil can be used for winding low voltage, which minimizes eddy current losses and provides higher short circuit resistance.







Rectifier Dry-Type Transformer

A Rectifier Transformer is a type of transformer that is used to limit the magnitude of fault currents in a power system. This type of transformer consists of a primary winding and secondary winding(s), both of which are connected in series with an inductive reactance. The inductive reactance helps to limit the fault current, thus preventing damage to the system components. Rectifier transformers are typically used in applications where the fault current must be limited to a low magnitude, such as in high-voltage transmission lines.

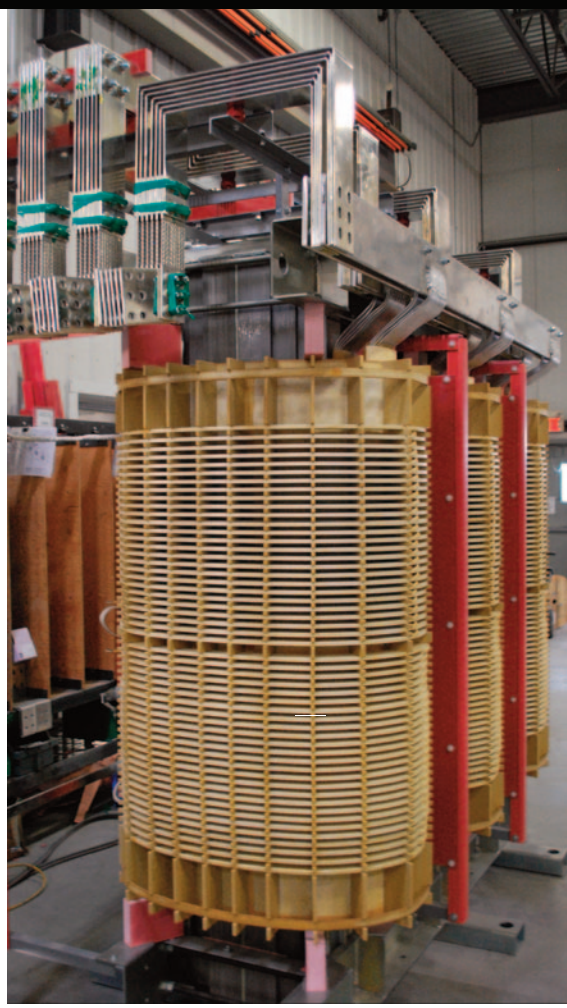
Connections on the secondary side can be customized according to the client's requirements, including delta, wye, and wye zigzag. All our rectifier transformers are manufactured and tested according to IEEE, ANSI, CSA, and UL Standards.

Sound Level

WR Transformers are designed not to exceed CSA C9's sound level.

5kV @ 15kV (95kV BIL @ 150kV BIL)	kVA
60dB @ 62dB	300 @ 500
62dB @ 64dB	>500 @ 750
64dB @ 66dB	>750 @ 1000
65dB @ 67dB	>1000 @ 15000

Note: If reduced sound levels are required, contact your WR rep for more details.



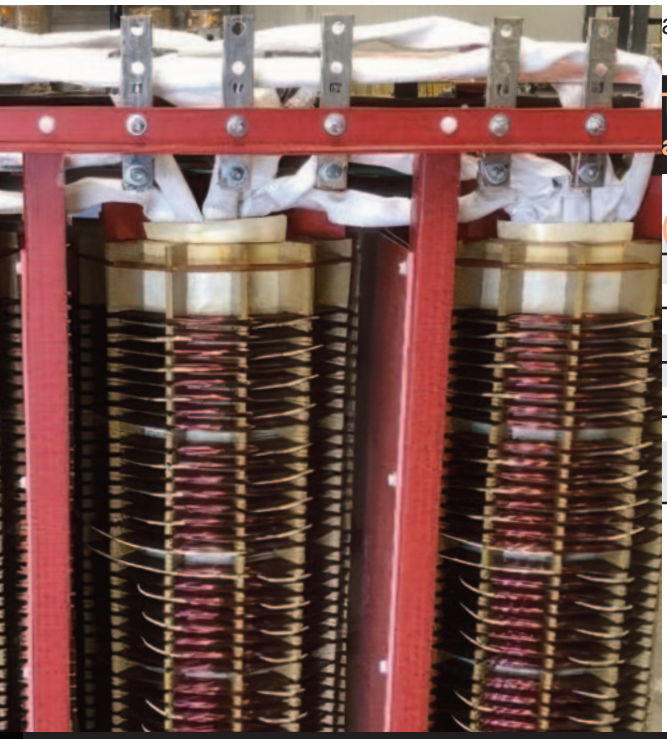
Insulation Class (Shock Hold) BIL

Tensions Nominal kV	Standard kV (BIL)
5.0	30
8.7	45
15	60
18	95
25	125
35	150

WR Transformers are built with Class 220°C insulation, and are UL listed and CSA certified.

Temperature Class for Transformers

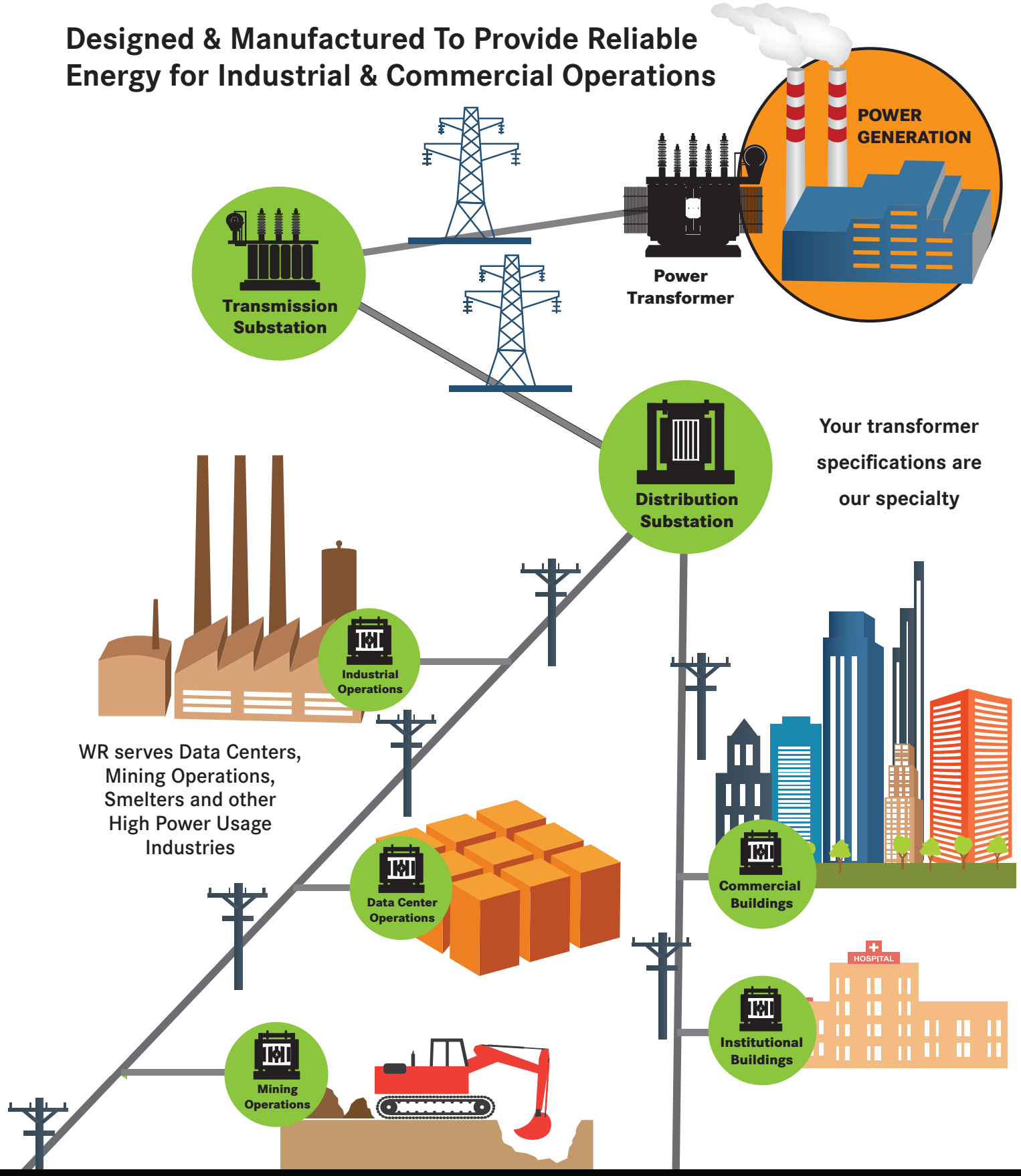
These are the maximum temperature rise of our transformers' windings. Data is based on an ambient temperature of 30°C – not recommended for over



Temperature Class (°C)	Temperature of Winding (Average)Winding Hottest Measured by Rise of Resistance (°C) Spot Rise (°C)
Class 105	55 65
Class 130	75 90
Class 150	90 110
Class 180	115 140

WR Transformers

Designed & Manufactured To Provide Reliable Energy for Industrial & Commercial Operations



Your transformer specifications are our specialty

WR serves Data Centers, Mining Operations, Smelters and other High Power Usage Industries

Facilities

WR Transformers has two ISO 9001:2015-certified manufacturing facilities located in the United States and Canada. Each operation is optimized to design and produce high-quality, custom dry-type transformers and features an ISO/IEC 17025-certified testing lab to ensure each transformer performs to its specifications prior to shipping.

Our U.S. facility, established in 2024, is in Tomball, Texas, a suburb of Houston.

2013 S. Persimmon Street • Tomball, Texas 77375

Located south of Montreal in Granby, Québec, this facility was established in 2013.

2961 Rue Brodeur E • Granby QC J0E2A0

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