ERMCO

TRANSFORMATEURS PIONEER
PIONEER TRANSFORMERS

Pioneer Transformers

Customization Is Our Specialty

ERMCO

ELECTRIC RESEARCH AND MANUFACTURING COOPERATIVE, INC

Agenda

1. **Pioneer Overview & Facts** - Who we are, footprint, stability
2. **Expansion Plan-** Facility growth, new capacity, 2026 timeline
3. **Capabilities & Core Products** – What we deliver,
4. **Testing Capabilities**
5. **Quality & Warranty** - proof + promise
6. **Tariff & Risk Mitigation**
7. **Key Customers** - credibility through partnerships
8. **Network & Contact Info** – reps, coverage, who to call
9. **Commitment & Next Steps** – why Pioneer is the right choice

ERMCO's Guiding Principles

To be recognized as the industry's most valued partner...

...we will grow sales and profits so we can reinvest in our company, people and communities, reward our owners, and delight our customers.

We partner with customers and stakeholders...

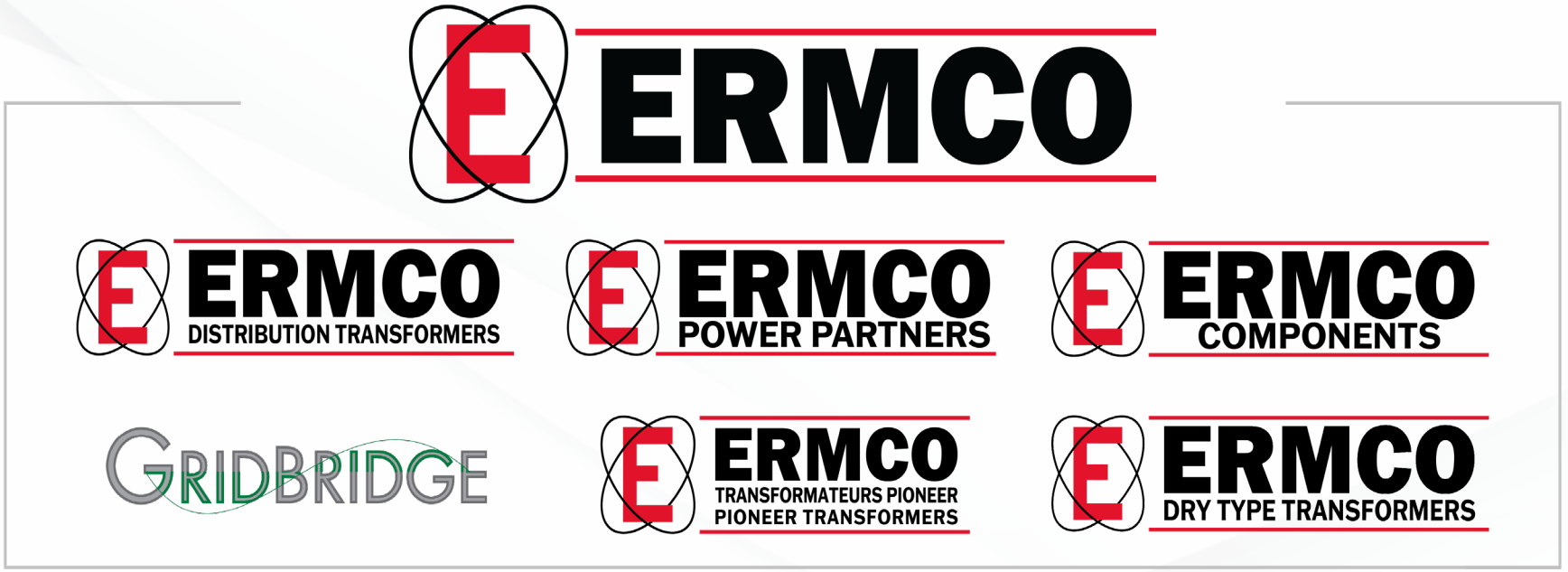
...who value extraordinary service and quality, and leverage these relationships as a foundation to build growth.

We will…

1. Be the most dedicated and **capable team** on the planet.
2. Be equipped with tools, processes and facilities that are **robust and scalable** with growth.
3. Develop a **pipeline of products** and solutions to solve customers' issues.
4. Create **service models** that meet customers' needs and exceed expectations.

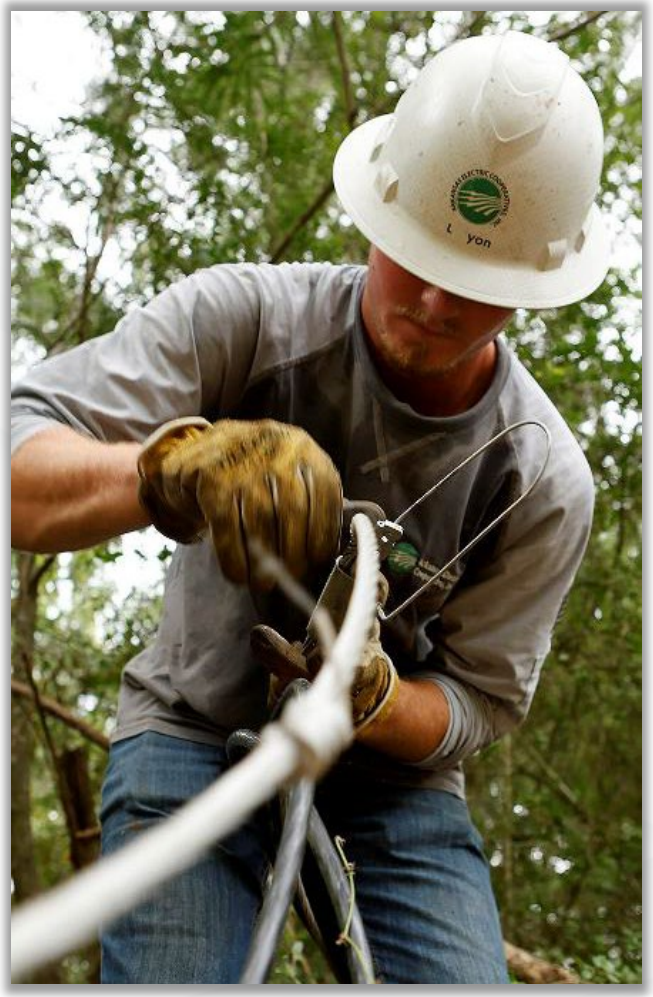
The ERMCO Family

Trusted by Utilities for 60+ years – backed by ERMCO's scale, expertise, and reliability.

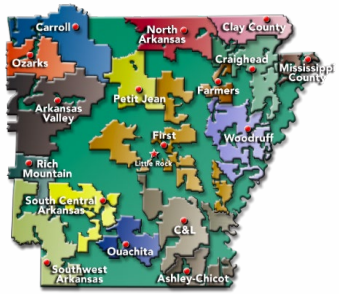


Pioneer isn't standalone – we are a part of a proven group serving the utility industry in USA & Canada.

ERMCO – A Subsidiary of Arkansas Electric



Arkansas Electric Cooperatives, Inc.



A Subsidiary of Arkansas Electric Cooperatives, Inc.

ERMCO (Electric Research and Manufacturing Cooperative, Inc.)

Headquarters in Dyersburg, Tennessee

ERMCO Locations

- **#1 in the liquid-filled distribution transformer space**.
- Approximately **3,500 associates**
- **Own 1.5M square feet of facilities** and approx. **50 acres** in Dyersburg, TN
- **Lease 800k square feet of facilities** and approximately **22 acres** in Athens, GA
- **Backward-integrated with components** business in Greeneville, TN, and Bristol WI
- **Forward-integrated with Advanced Technology Center** (GridBridge) in Raleigh NC

Pioneer Manufacturing Facility
Granby, Quebec

Pioneer Sales and Engineering Center of Excellence
Mississauga, Ontario

Manufacturing Facility Overview – Current State

134 Employees Since 2024

Manufacturing Facility

Granby, Quebec

- ~50k total sq. ft.
- Current Production Space: 36k sq. ft.
- Expansion space planned
- Property is owned

Union Information

- Métallos, section locale 9414 union details
- Contract expiration: **March 2030**
- All hourly employees are in the union
- Running 2 shifts / day at 8 hours for 5 days a week (effectively 1.5 shifts as the Company continues to add headcount)
- Flexing extended hours and weekend shifts for additional capacity

1965 Federal Pioneer was Formed

1990 Schneider Electric acquired Federal Pioneer, including Granby, Quebec facility

1995 Pioneer Power Solutions Inc. (PPSI) acquired the Granby site from Schneider Electric

Purchased by Spire in 2019 as part of a carve out of PPSI

Purchased by ERMCO December 2022

Certificate of Registration

ERMCO-PIONEER TRANSFORMERS is certified to ISO 9001 since 1995.

CERTIFICATE

dqs

This is to certify that

Pioneer Electrogroup Canada ULC

612 Bernard Street
Granby, Quebec J2J 0H6
Canada

has implemented and maintains a **Quality Management System**.

Scope:
Design, development and manufacturing of liquid-filled transformers.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	31635116 QM15
Date of original certification	2025-11-06
Date of certification	2025-11-06
Valid until	2028-03-03

DQS Inc.

David Tellez
Managing Director

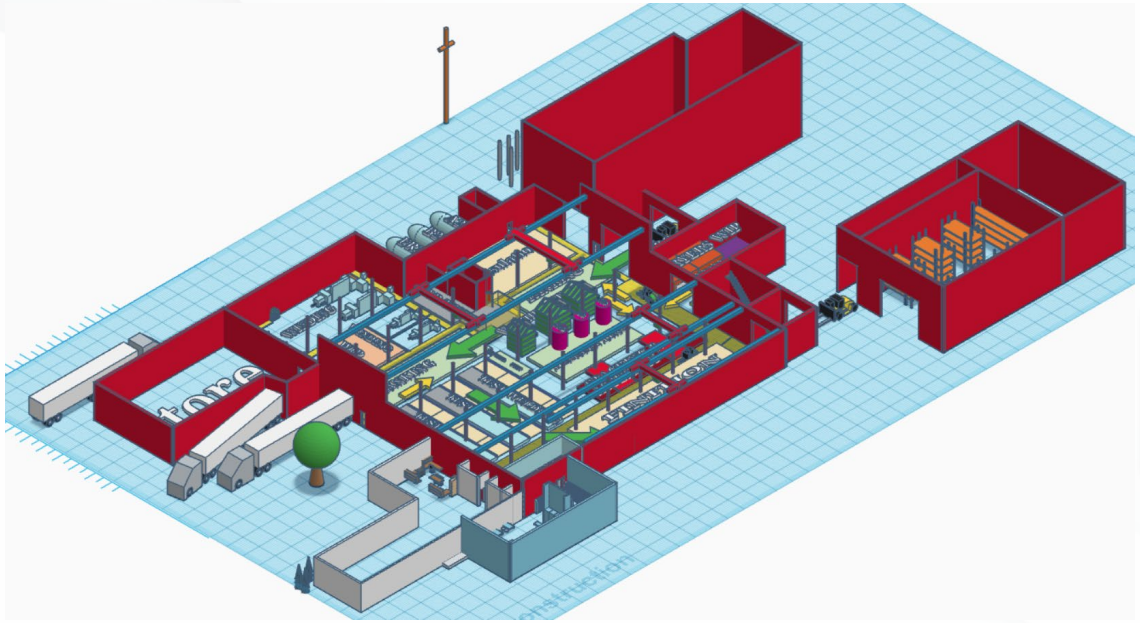
DQS IS A MEMBER OF IQNET

Accredited Body: DQS Inc., 1500 McConnor Parkway, Suite 400, Schaumburg, IL 60173 USA
The validity of the certification can only be verified by the QR-code.

https://pioneertransformers.com/wp-content/uploads/2025/11/QM15_31635116-QM15_EN.pdf

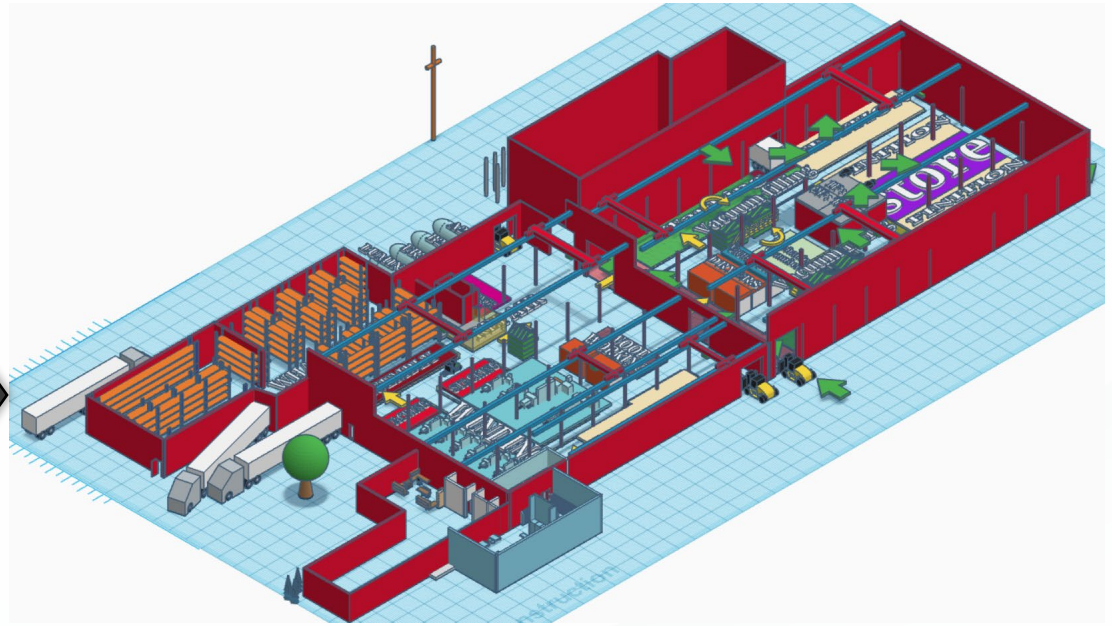
Manufacturing Facility Overview - Future State

GRANBY FACILITY 2024



2026

GRANBY FACILITY 2026



Before

- 50,000 sq. ft.
- Ad hoc manufacturing layout from 70 years of product evolution

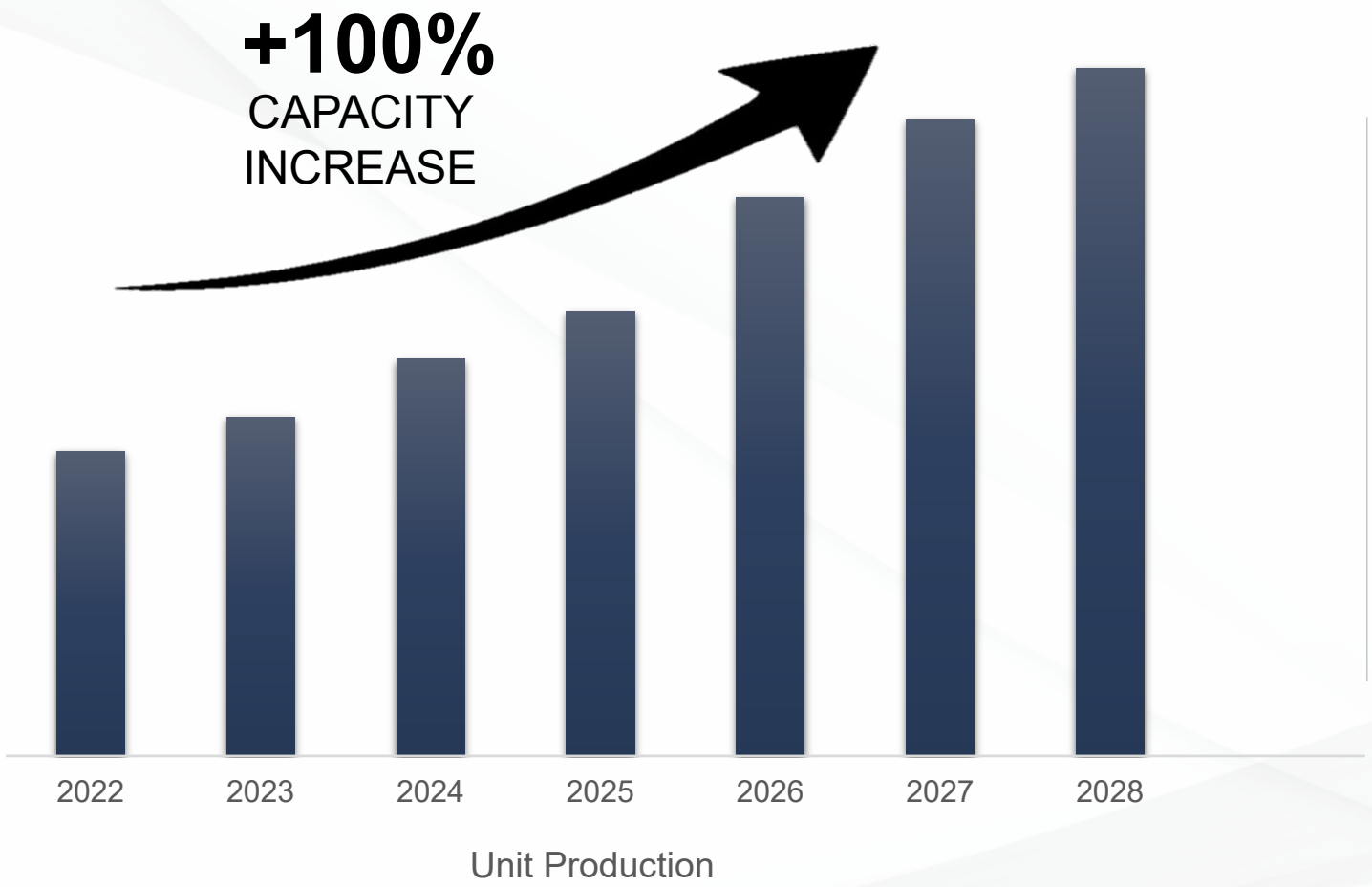
After

- 75,000 sq. ft.
- Purpose built production lines minimizing travel
- Increased / enhanced storage to minimize delays
- 118% Increase in capacity

How Expansion Strengthens Our Customer Promise

- **~ $20M CAD** investment in Granby Facility
- **+ 25,000 sq ft** added for Expanded Operations
- **3 new separate production lines** designed for different product scopes
- **Increased production capacity**, effectively **doubling output**, with a **25% year-over-year growth** trajectory to meet rising customer demand.
- **Lead Times Reduced** - General lead time drawing for our network transformers will be 1-2 weeks. Full detailed drawing lead times are usually 2-4 weeks - depending on complexity and workload. Transition from **2D to 3D drawings** to align with evolving industry standards.
- Ensuring we can meet **growing transformer demand** with **local supply.**
- Our expansion **boosts Network Transformer capacity** and reinforces market leadership, while enhancing efficiency in **manufacturing Distribution, Zig-Zag** *(stack core only)* **, and Padmount transformers** using advanced **wound core** technology

Pioneer Capacity Expansion



+25,000 sq ft facility expansion to support transformer growth

3 Dedicated Production Lines

Adding +4 new winding machines to increase coil output

Scaling from 94 to 150 employees (+60%) by 2027 to support expanded operations

Transitioning to full two-shift operations

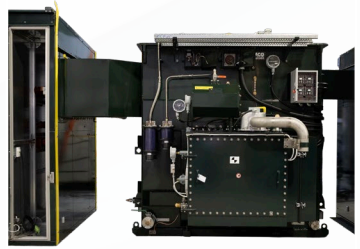
Pioneer Products
Built to your specifications

Network Transformers

3PH Padmount Transformers

Submersible Transformers

Substation Transformers



Grounding Transformers

Network Transformers

Pioneer manufactures Network Transformers from **500 kVA to 5 MVA**, engineered for vault-type or subway-type applications in dense urban network environments. Each unit delivers exceptional reliability and complies with latest **IEEE Std. C57.12.40, DOE,** and **CSA C199** standards

Network Transformers

Core & Coil Design

- **Core Material: Grain-Oriented Electric Steel (GOES)** and **Amorphous**
- **Full-width strip foil LV windings** provide mechanical strength and reduced axial forces
- **Balanced HV windings** wound directly over LV coils to minimize axial stress under short-circuit conditions
- **Amorphous Epoxy-bonded coils** oven-processed into solid, rigid structures
- **Firmly braced assembly** withstands severe short-circuit forces

Tank Construction

Copper-bearing steel tank (≥0.20% Cu), grid-blasted, zinc-primed, with epoxy-polyamide coating (≥7 mils DFT). Minimum 7 PSIG pressure rating.

Network Protectors

Network transformer protector prevents reverse power flow from the secondary to the primary side. It disconnects the transformer during faults or reverse current and automatically recloses when normal voltage returns. Its purpose is to protect equipment and maintain reliable power in network systems.

Switchgear & Safety

Three-pole, three-position HV switch with optional Mag-Break mechanism. Fully IEEE-compliant interlocks.

Cable Terminations

Separate HV chamber supports stuffing boxes, potheads, or apparatus bushings.

Specification	Details
kVA Rating	500 kVA to 5 MVA
Frequency	50 Hz / 60 Hz
Primary Voltage	Up to 34.5 kV
Secondary Voltage	Up to 4.16 kV
Configuration	Vault-type or Subway-type
Insulating Fluids	Mineral Oil, FR3, Midel 1204, Midel 7131 Synthetic
Standards	IEEE C57.12.40, DOE, CSA C199, ISO 9001
Hardware	Solid stainless-steel switch-handle components

Applications: *Designed for vault-type and subway-type network systems in dense urban environments requiring reliable underground power distribution.*

Three-Phase Padmount Transformers

Pioneer manufactures fully tamper-proof, three-phase padmount transformers up to **10 MVA** with top voltages of **69 kV (350 kV BIL).** Available in radial-feed or loop-feed configurations with live-front or dead-front designs to meet diverse utility and industrial requirements.

Construction & Design Excellence

Engineered for outdoor, ground-mounted installations with complete tamper-proof protection. Units feature robust cabinet and tank construction available in mild-steel, stainless-steel, or hybrid configurations for maximum corrosion resistance and durability.

3PH Transformers

1500KVA Dead Front Radial Feed Three phase Padmount 24.9kVGY/14.4 kV - 600Y/347V

Fuses & Protection

- Draw-out and/or under-oil expulsion fuses
- Current-limiting fuses
- Bay-O-Net fuses
- Single or two-fuse systems

Switching Options

- Load-break HV bushing inserts
- Dual-voltage switch
- Tap switch
- Load-break switch/switches

Monitoring

- Dial thermometer
- Liquid-level gauge
- Pressure-vacuum gauge
- Various instrumentation

Specification	Value
kVA Rating	500 kVA to 10 MVA
Primary Voltage Class	Up to 24.94 kV, 500 kVA to 5 MVA (with 69 kV) – Larger Unit Focus
Secondary Voltage	4.16 kV (Wound) 24.94 kV (Stacked)
BIL Rating	Up to 350 kV BIL
Temperature Rise	55°C / 65°C
Frequency	60 Hz (50 Hz optional)
Cooling / Fluid Options	Mineral Oil, FR3, Midel 1204, Midel 7131 Synthetic
Standards	CSA C227, CSA C2.1, DOE, IEEE C57.12.34

Applications: *Ideal for commercial, industrial, and utility distribution systems requiring medium-voltage, tamper-proof outdoor service with exceptional reliability and safety features.*

Submersible Network Transformers

Pioneer manufactures Subway and Vault-Type Network Transformers up to **5 MVA.** Each unit is precision-engineered for long-term reliability in underground distribution systems where compact size, safety, and corrosion protection are mission-critical.

Submersible Transformers

Superior Construction & Protection

Copper-bearing steel tank construction (≥0.20% Cu) delivers superior strength and durability. Tanks are surface grid-blasted, primed with rich zinc coating (≥7 mils DFT), and finished with a two-component epoxy-polyamide paint system for outstanding corrosion resistance in harsh underground environments. Stainless-steel construction is available for extreme moisture-prone environments. Rigidly braced core-and-coil assemblies withstand severe short-circuit conditions.

Monitoring

Dial thermometer, liquid-level gauge, pressure-vacuum gauge, pressure-relief device

Corrosion – Resistant Options

304L & 316L Stainless-steel tank & radiator construction available for moisture- prone applications

Fuses & Protection

Bay-O-Net fuses, weak-link cartridge fuses, current-limiting fuses

Switching

Load-break switches, tap changers, MOV surge arresters (under-oil or elbow type). Separate HV terminal and switch chambers ensure ease of access and safe operation.

Specification	Details
kVA Rating	250 kVA to 5 MVA
Frequency	50 Hz / 60 Hz
Primary Voltage Class	Up to 34.5 kV
Secondary Voltage Class	Up to 4.16 kV
Temperature Rise	55°C / 65°C
Cooling / Fluid Options	Mineral Oil, FR3, Midel 1204, Midel 7131 Synthetic
Standards	IEEE C57.12.24, DOE, CSA C199

***Applications**: Engineered specifically for vaults, subway networks, and underground power distribution systems requiring compact, sealed transformers that meet strict urban reliability and safety standards.*

Substation Transformers

Pioneer offers a comprehensive range of Substation Transformers for utility, industrial, and commercial markets, spanning from **250 kVA** single-phase up to **5 MVA** three-phase, with top voltages reaching **44 kV** using wound core. We can also support stacked configurations up to 20 MVA depending on requirements. All units are designed and tested to meet industry standards and comply with CSA C88 and IEEE C57 series.

Substation Transformers

2 MVA 13.8kVD-600Y/347V
Three phase Substation Transformer

Flexible Design & Construction

- Available with top- or wall-mounted bushings, throats, or junction boxes to accommodate diverse installation requirements. Robust tank and core design ensures dependable indoor or outdoor service across multiple applications.
- Optional stainless-steel tank and radiators provide enhanced corrosion resistance for extended service life. Units are engineered for high dielectric strength and long-term operational reliability.

Construction Options

- 55°C / 65°C temperature rise
- Stainless-steel tank & radiators
- Custom bushing configurations
- Enhanced durability feature

Electrical Control

- De-energized tap changer
- On-load tap changers
- Multiple voltage arrangements
- Fan cooling or provision for fans

Protection & Monitoring

- Current transformers (CTs)
- Neutral grounding resistor
- External core ground
- Pressure-relief devices
- Lightning arresters

Specification	Details
kVA Rating	Wound Core: 250 KVA - 5 MVA @ <= 69kV Stacked Core: 5MVA - 20 MVA @ <= 44 kV
Frequency	50 Hz / 60 Hz
Primary Voltage Class	Up to 69 kV
Secondary Voltage Class	Up to 4.16 kV
Temperature Rise	55°C / 65°C
Cooling / Fluid Options	Mineral Oil, FR3, Midel 1204, Midel 7131 Synthetic
Standards	CSA C88, IEEE C57.12.10

***Applications**: Designed for utility substations, industrial power systems, and commercial distribution networks requiring medium-power, custom-configured transformer solutions with proven reliability.*

Grounding Transformers

Pioneer manufactures Grounding Transformers with maximum primary voltages of **72.5 kV (350 kV BIL),** available with auxiliary or secondary windings upon request. These specialized units provide critical system grounding where a suitable ground is otherwise unavailable, stabilizing voltage during unbalanced conditions and limiting transient fault over-voltages.

01

Ground Path Provision

Establishes electrical ground for systems lacking natural neutral grounding

02

Voltage Stabilization

Maintains stable voltage during unbalanced load conditions or line-to-ground faults

03

Fault Current Limitation

Limits fault-current magnitude when integrated with Neutral Ground Resistors

04

Over-voltage Protection

Restricts transient fault over-voltages to protect system integrity

Cooling & Construction

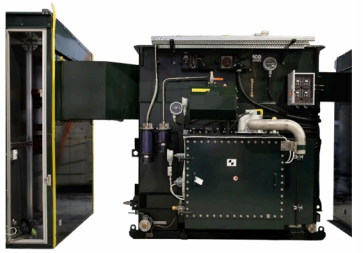
- Detachable cooling radiators with optional shut-off valves
- Galvanized radiators for corrosion resistance
- Substation-type or tamper-proof designs
- High thermal capacity for momentary fault currents

Electrical & Protection

- Primary, secondary, and neutral current transformers
- Neutral grounding resistor integration on request
- High fire-point liquids (FR3, Silicone, Beta Fluid)
- Cover- or wall-mounted bushings with air terminal chamber

Two Common Configurations

- **Zig-Zag (Zn)** – with or without auxiliary winding; preferred for compact size and cost efficiency
- **Wye (YNynd)** – with delta-connected tertiary winding for specialized applications
- For enhanced safety, **Neutral Ground Resistors** may be integrated to limit fault-current magnitude.



Grounding Transformers

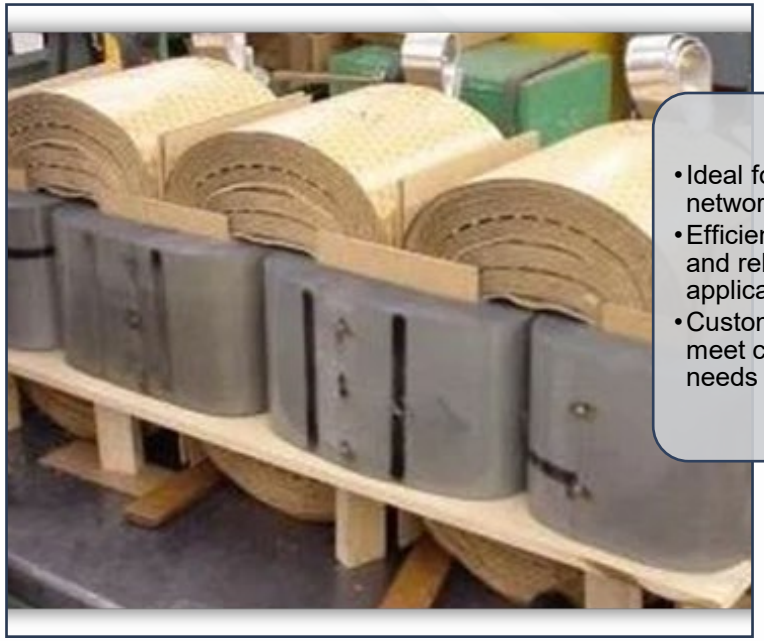
Specification	Details
Primary Voltage Class	Up to 72.5 kV (350 kV BIL)
Frequency	50 Hz / 60 Hz
Configuration	Zig-Zag (Zn) or Wye-Delta (YNynd)
Auxiliary / Secondary Winding	Optional
Cooling / Fluid Options	Mineral Oil, FR3, Midel 1204, Midel 7131 Synthetic
Temperature Rise	55°C / 65°C
Standards	CSA, IEEE
Tank Construction	Copper-bearing steel with optional radiators

***Applications**: Essential for industrial plants, substations, and distribution systems requiring reliable system grounding, voltage stabilization, and fault current management in accordance with CSA and IEEE standards.*

The Right Core for the Right Job

Pioneer offers both **wound** and **stacked** core designs, ensuring the **right solution** for every customer application. Each design is engineered to meet specific performance requirements and application demands.

Wound Core – Efficient & Flexible



- Ideal for distribution and network transformers
- Efficient, cost-effective, and reliable in everyday applications
- Customizable sizing to meet customer-specific needs

Stacked Core – Robust & Scalable

- Designed for substations, grounding, and specialty builds
- No size limitations - supports large and complex projects
- Enables advanced features such as tap changers and disc windings

Pioneer Transformers: Built for Durability & Quality

Pioneer Tank & Quality Advantages

Copper-bearing steel tanks **resist rust** and extend service life

Tanks **C88 standard builds** (Canadian equivalent of ANSI C57) deliver higher vacuum withstand capability

Heavy-duty "Yukon Rads" option: extra-thick steel for superior rust and deformation resistance

Industry-leading equipment with **degasified and vacuum system**, **double tanking and vacuum capacity**, and two **new testing stations,** ensuring **consistent builds** and **faster lead times**

ISO 9001 certified since 1995 - over 30 years of proven quality management

Testing Capability and Equipment

In-House Testing

3 test cells in-house: Distribution, Power, and Annex B (for bigger transformers and special tests).

Utility cart equipped to: perform winding impedance measurements, check the correct operation of liquid level and temperature gauges and perform dielectric tests up to 2.5 kV on control panels.

Partial discharges and insulation power-factor equipment are mobile.

Distribution Test Cell (Max 3 MVA; Max 34 kV)

ERMCO has invested in the expansion plan project. Part of the expansion project is an additional test cell for distribution. This is the newest test cell in the Granby location.

Main Transformer
- **Maximum power:** 150 kVA.
- **Taps:** 250 V, 500 V, 1.3 kV, 2.5 kV, 5 kV, 8.5 kV.
- **Imax:** 140 A.

Hipot Transformer
- **Power:** 20 kVA.
- **Vmax:** 72.5 kV.

Supply
- Pacific power 2 x 62.5 kVA @ 50-400 Hz.

Tests	Distribution	Equipment
Ratio (67 V max)	X	Tettex Winding Analyzer 2293
Resistance (32 A max.)	X	
Load Losses / Impedance	X	Power Meter Yokogawa WT500
No-Load Losses	X	
Excitation Current	X	
Insulation	X	Reed 360 (4 GΩ)
Dissipation Factor	X	Multi-Amp C & DF Bridge CB100 Megger Delta 2000. Tettex Midas 2883
Capacitance (12 kV max.)	X	
Induced Voltage	X	Yokogawa WT500
Applied Voltage	X	
Partial Discharges**	X	Omicron MPD 500
Interlock Coil Test	X	Variac with voltmeter
Sound Level	-	
Temperature Rise	-	
Impulse*	X	Yokogawa DL950 Oscilloscope
Oil Test	X	Baur Oil Tester DPA Vaisala WMI41 RH meter

*Full-Wave 400 kV max.; Chopped-Wave 385 kV max.
** Maximum interference 10 pC.

Power Test Cell (Max 10 MVA; Max 44 kV)

The Power Test Cell is the oldest test cell in Granby and remains a cornerstone of our operations. It reliably handles most routine tests without issue. Beyond its functionality, this cell represents an important part of our heritage - symbolizing our long-standing commitment to quality and confidence in the products we deliver.

Main Transformer

- **Maximum power:** 1000 kVA.
- **Taps:** 500 V, 1 kV, 2 kV, 5 kV, 16.5 kV, 17 kV, 29 kV.
- **Imax:** 300 A.

Hipot Transformer

- **Power:** 20 kVA.
- **Vmax:** 100 kV.

Supply

- Distribution network through variac 85 A.
- Synchronous generator 420 Hz.

Tests	Power	Equipment
Ratio (67 V max)	X	Tettex Winding Analyzer 2293
Resistance (32 A max.)	X	
Load Losses / Impedance	X	Yokogawa WT500
No-Load Losses	X	
Excitation Current	X	
Insulation test	X	AEMC 6527 (3.85 GΩ)
Dissipation Factor	X	Multi-Amp C & DF Bridge CB100 Megger Delta 2000. Tettex Midas 2883
Capacitance (12 kV max.)	X	
Induced Voltage	X	Yokogawa WT500
Applied Voltage	X	
Partial Discharges*	X	Omicron MPD 500
Interlock Coil Test	X	Variac with voltmeter
Sound Level	-	
Temperature Rise	-	
Impulse (350 kV)	-	
Oil Test	-	

* Maximum interference 10 pC.

Annex B Test Cell (Max 25 MVA; Max 69 kV)

The Annex B Test Cell is dedicated to testing larger transformers and handling special projects. Routine tests for these units are performed here using our original BIL equipment, which has been enhanced with a modern oscilloscope for improved accuracy and reliability.

Main Transformer
- **Maximum power:** 250 kVA.
- **Taps:** 500 V, 1 kV, 2 kV, 3 kV, 5 kV, 8 kV.
- **Imax:** 800 A.

HV Transformer
- **Maximum power:** 125 kVA.
- **Taps:**5 kV, 15 kV, 30 kV, 60 kV, 150 kV, .
- **Imax:** 14.4 A.

Hipot Transformer
- **Power:** 40 kVA.
- **Vmax:** 150 kV.

Supply
- Distribution network through variac 140 A.
- Pacific power 62.5 kVA @ 50-400 Hz.

Tests	Power	Equipment
Ratio (67 V max)	X	Tettex Winding Analyzer 2293
Resistance (32 A max.)	X	
Load Losses / Impedance	X	Yokogawa WT500
No-Load Losses	X	
Excitation Current	X	
Insulation test	X	AEMC 6527 (3.85 GΩ)
Dissipation Factor	X	Multi-Amp C & DF Bridge CB100 Megger Delta 2000. Tettex Midas 2883
Capacitance (12 kV max.)	X	
Induced Voltage	X	Yokogawa WT500
Applied Voltage	X	
Partial Discharges**	X	Omicron MPD 500
Interlock Coil Test	X	Variac with voltmeter
Sound Level	X	Reed R8050 Sound level meter
Temperature Rise	X	Tettex 2293, Graphtec GL240
Impulse*	X	Yokogawa DL950 Oscilloscope
Oil Test	-	

*Full-Wave 400 kV max.; Chopped-Wave 385 kV max.
** Maximum interference 10 pC.

Quality that Delivers Results

Proven Innovation: Amorphous steel core now in 3-phase transformers up to 1000 kVA - improving efficiency and long-term reliability.

On-Time Excellence: Delivery is 96.5%, showing strong dependable performance.

Trusted by Utilities Across North America: Confidence earned through quality and reliability with over 20 Customers in North America

Expanded Capacity: First assembly & testing line completed 2025; second line by June 2026 - ensuring consistent, scalable quality output.

Commitment to Reliability: Ongoing process improvements deliver consistent, field-proven performance

Key Materials and Supplier Partnerships

ERMCO maintains a **diversified and resilient supplier network** to ensure **steady material availability**, **consistent product quality**, and minimal risk of supply interruption. This approach strengthens our ability to **meet customer demand** even during market fluctuations.

Materials

- **Steel (Core & Amorphous):** Three established suppliers, including ERMCO Bristol, which produces amorphous steel used for high-efficiency designs
- **Magnet Wire (Copper Wire)**: Supported by three or more qualified suppliers to ensure reliability and material consistency
- **Copper Strip:** Single-source material, proactively monitored with contingency options for continuity

Additional Components

- **Radiators**: Sourced from two trusted partners who provide interchangeable, high-performance cooling systems across product lines
- **Transformer Oil:** Three suppliers certified to meet industry and environmental standards, ensuring quality and regional availability
- **Electrical Components:** Three qualified suppliers support continuous production through standardized, interchangeable designs and reliable lead-times

Supply Chain Outlook

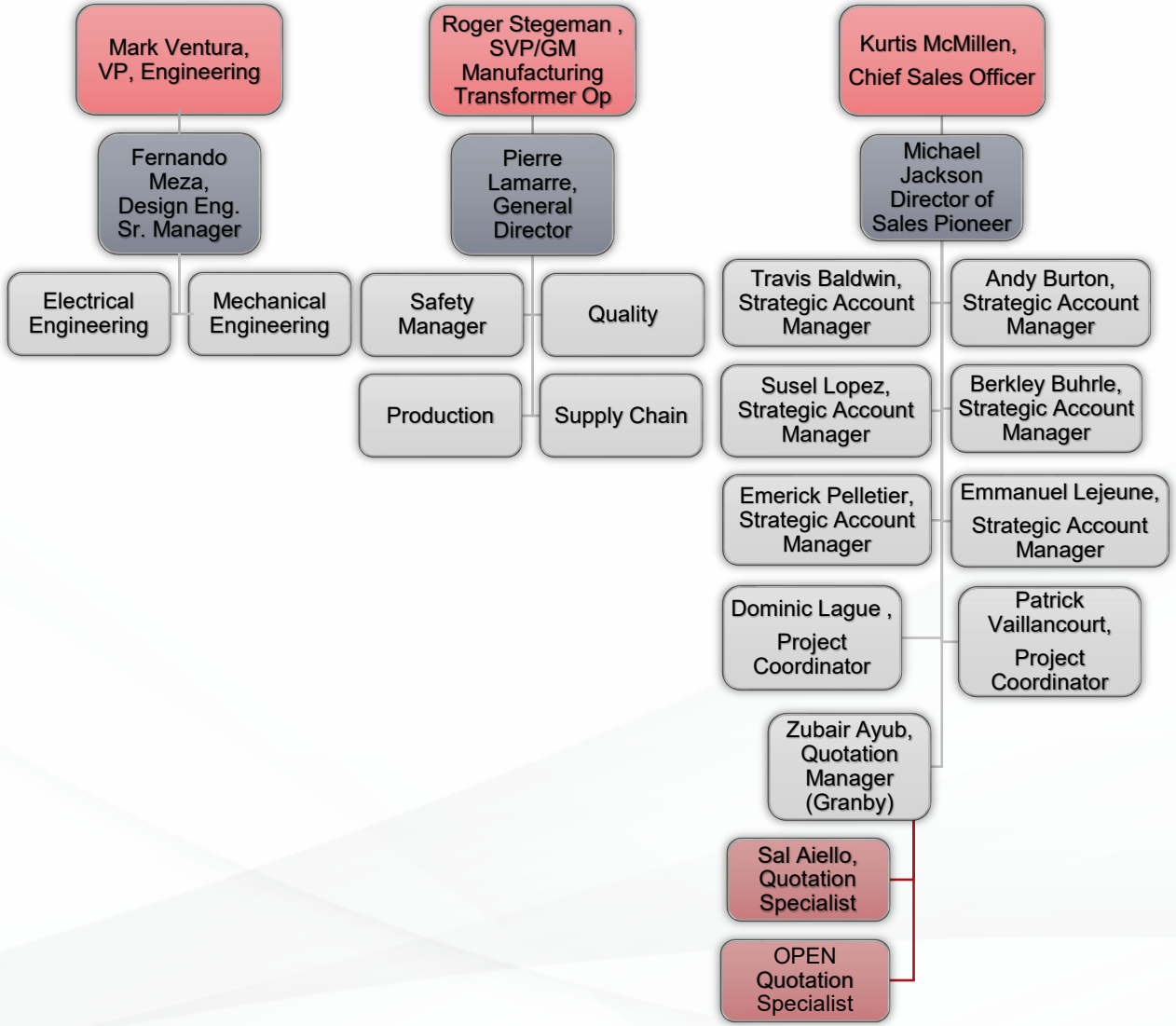
Import & Supply Base	Primarily USA & Canadian suppliers
	→ limits tariff exposure
	Diversified sources for reliability
Market Conditions	Prices relatively stable through 1H 2025
	Some suppliers signaling adjustments for tariffs
Steel Sector Impact	Steel & aluminum face tariff pressure
	No immediate increases from Canadian/US core suppliers
Proactive Management	Ongoing supplier collaboration
	Planning for potential future price adjustments

Key Customers

Leadership and Sales Support

What We Do

- ✓ Quotation Support
- ✓ Deliver fast accurate quotes and order support
- ✓ Serve as your daily point of contact for updates and needs
- ✓ Align production and delivery to meet your commitments
- ✓ Partner cross-functionally to deliver consistent results



ERMCO's Products & Markets

Liquid Filled

Network Transformers

500 kVA - 5 MVA | Up to 34.5 kV

Three Phase Padmount Transformers

10 MVA | Up to 69 kV

Submersible Transformers

5 MVA | Up to 34.5 kV

Substation Transformers

250 kVA – 5 MVA (Wound) | Up to 20 MVA (Stacked) | Up to 69 kV

Grounding Transformers

Application - based kVA | Up to 72.5 kV

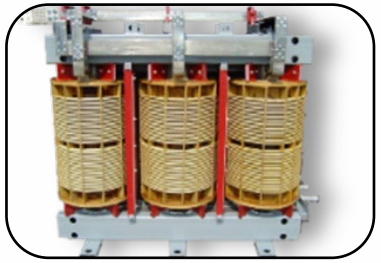
Single Phase Pole Mount

Single Phase Padmount Transformers

Three Phase & Custom Pole Mount

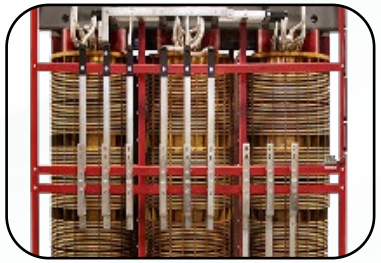
End markets: *Utility, Public Power, Renewable, Oil and Gas, Construction, Commercial and Industrial Applications*

Dry Type



PDU Transformer (Data Center)

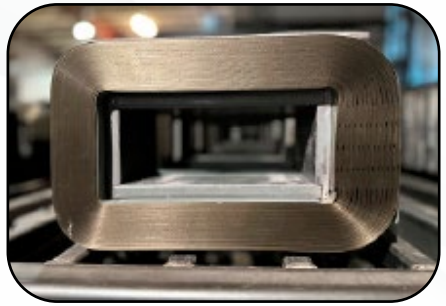
Ventilated Transformers



Medium Voltage

End markets: *Data Centers, Electric Vehicle (EV), Commercial and Industrial Applications*

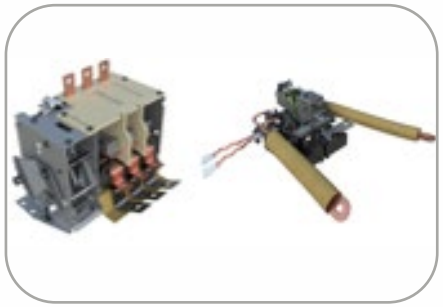
Components



Amorphous Cores

Arrestors

- Single Phase
- Three Phase

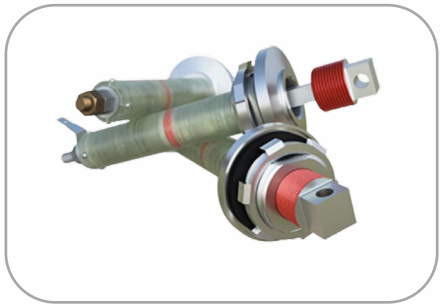


Circuit Breakers

- 5-50 kVA
- 75-167 kVA
- Three Phase

Dry-well Fuseholders

- Submersible Non-Loadbreak
- Standard Non-Loadbreak



Arrestor Disconnect Switch

- Arrestor Disconnect Switch
- Neutral Disconnect Switch

Bushings

- HV Bushing Well
- Integrated Bushing
- Pole-mount LV Bushing
- Tri-clamp LV Bushing

Breaker Accessories

- Signal Lights
- Operating Handle
- Overload Switch Assemblies
- Operating Rod

Fuses

- Bayonet Type Expulsion Fuse
- Bushing Mount Expulsion Fuse
- Isolation Link
- Terminal Fuse Board
- Bushing Fuse

Product Accessories

- Anti-Tracking Kit
- Drip Shield
- Terminal Board

Wildlife Protection Products

- Standard and Fire-Retardant Products
- Cap
- Clamp Shell
- Hand Wheel

Components

Bushings

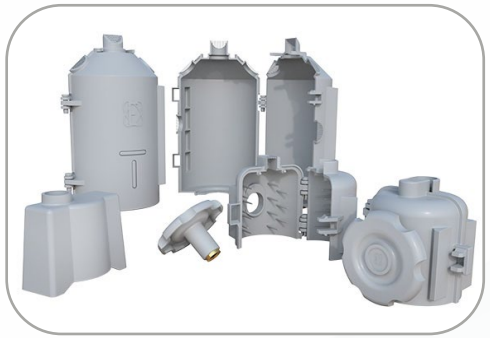
- HV Bushing Well
- Integrated Bushing
- Pole-mount LV Bushing
- Tri-clamp LV Bushing

Product Accessories

- Anti-Tracking Kit
- Drip shield
- Terminal Board

Expulsion Fuses

- Bayonet Type Fuse
- Bushing Fuse
- Isolation Link
- Terminal Board Fuse



Wildlife Protection Products

- Cap
- Clam Shell
- Hand Wheel

Most Valued Partner in Reliable Custom Solutions

We are committed to being your **Most Valued Partner** in delivering **Distribution**, **Network and Specialty Transformers** - delivering reliable, custom-engineered solutions that meet your needs today and tomorrow.

Customer-Driven Design

- ✓ **Flexible engineering** tailored to customer requirements
- ✓ Ability to meet unique specs across distribution & network applications
- ✓ **Customization** & flexibility

Product Reliability

- ✓ **Multiple insulating oils** available (Mineral, Synthetic, and FR3) to meet diverse needs
- ✓ Built to **CSA & ANSI** standards, backed by ERMCO scale and quality assurance
- ✓ Premium Quality – **ISO 9001 certified**

Sustainable Growth

- ✓ Expansion in Granby adds capacity and reduces lead times
- ✓ **Local supply base** ensures stability and resilience against global tariffs
- ✓ Sustainable Lead Times

Partnership Promise

- ✓ Transparent communication and collaboration
- ✓ Focus on long-term reliability, cost efficiency, and performance for utilities
- ✓ **Direct Access & Strong Partnerships**

Questions?

Thank You

Wound Core

Wound

- Distribution / Networks / Distribution/Ground/Stacked Transformers
- 5 MVA up to 44 kV
- Similar to ERMCO 3Phase but more robust and unique

- Very similar in construction
- All cores are custom sized. No set core dimensions.
- All core steel is picked particular to that customers requirements. Many different core grades used.
  - MOH, ZDMH, AMT
- Clamping uses 3/8” steel. Able to withstand short circuit testing.
- Allowance for complex designs. IE Dual Voltage with taps.
- Only a few different sizes of conductor used but always copper vs aluminum.

Stacked Core

Stacked

- Substations / Grounding / Specialty
- No Size limitation
- Robust compared to wound core
- Can vary greatly in complexity
  - IE Layer vs Disc Windings
  - On Load Tap Changers
  - Controls

- Around 5MVA it becomes difficult to manufacture wound core transformers.
  - Handling of material is harder and limitation of the core steel
- Need to move to Stacked core
  - Exactly as it sounds. Core steel laminations (sometimes same grade of steel as wound core) are “stacked” and overlapped to make either a 3 limb or 5 limb core.
  - Stacking is labor intensive. 1 sheet handled at a time instead of books of 5 sheets at a time.
  - It can become heavy and could require special jigs to lift to ensure no movement in the laminations.