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## ***Dry-Type Distribution Transformers***



- 112 kVA thru 7500 kVA
- 480 V thru 25 kV Primary Voltage; 10 kV thru 110 kV BIL
- 120 V thru 15 kV Secondary Voltage; 10 kV thru 95 kV BIL

***Let IE design and manufacture a quality  
Transformer for your application***

## IE Custom Dry-Type Transformers

IE specializes in designing and manufacturing custom dry-type industrial transformers for the commercial, utility, and mining markets. With over 20 years of experience in designing electrical equipment and our long-standing commitment to quality and customer service, you can be sure that every IE transformer meets the most stringent requirements for performance and reliability.

### Windings:

IE uses state-of-the-art winding machines equipped with variable air actuated tension for each spool of wire and secondary clamp tensioning. This equipment produces a tighter coil which ensures maximum durability against short circuit stresses.

As a standard, IE uses Class 220 °C insulation (including Nomex<sup>®</sup> Aramid paper) to withstand high temperature rises for longer transformer life.



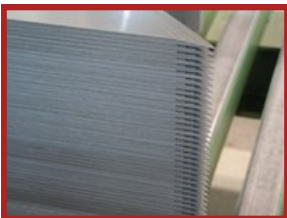
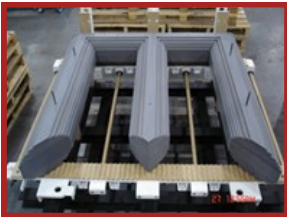
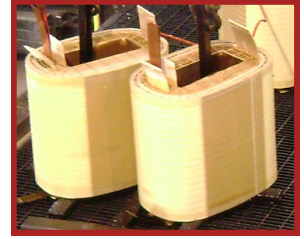
## Varnish Impregnation System:

For maximum protection, IE uses a two-step process as our standard procedure. First, we vacuum pressure impregnate every coil. After the entire core and coils assembly is complete, the transformer is then dipped and baked in the same epoxy varnish.

The advantages of this procedure are:

- Superior penetration for maximum protection against moisture and other contaminants
- Improved heat dissipation to eliminate hot spots
- Eliminate air pockets that can occur during typical dip and bake process thus making the transformer less susceptible to tracking and corona issues

IE also offers an epoxy overcoat option for enhanced environmental protection.



## Cores:

As a leader in transformer design and construction, IE has invested in the best transformer core cutting technology in the industry, the GEORG machine.

The combination of precision miter cut joints and multi-step-lap construction reduces magnetic flux transfers and increases the number of gaps per sequence, thus decreasing core losses, excitation current and sound level.

***IE can meet DOE Energy Efficiency***



## Enclosures:

All enclosures are built with a rugged, welded base with provisions for lifting, jacking, towing, skidding, or rolling in any direction for installation. Enclosure panels are built with heavy gauge sheet steel and designed to be bolted for easy access to the transformer taps. Enclosure types include NEMA 1, NEMA 2, and NEMA 3R.

Standard construction includes stub up terminations. Options include:

- AA/FA with fan cooling and temperature controls
- Primary and/or secondary bus designed to meet customer connections
- Primary and/or secondary air terminal chambers (ATC) for customer connections
- Ventilation filters for both indoor or outdoor units

## Quality Assurance:

Using our state-of-the-art testing equipment, IE tests every transformer to satisfy the standards required by IEEE C57.12.01 (General Requirements for Dry-Type Transformers). Also, using our in-house impulse generator, IE tests each new design.



The impulse tests measure the effectiveness and integrity of the insulation system inside of the transformer coils, and the ground clearances inside and outside of the coils, to assure maximum protection against lightning and switching surges and a longer lasting transformer.

## Standard Transformers:

In addition to custom transformers, IE offers a variety of “off-the-shelf” transformer designs:

Part #	KVA	Primary Voltage	Primary BIL	Sec. Voltage	Temp Rise °C	Elevation (Feet)	Primary Taps	Weight (lbs)	HxWxD (Inches)
1091-0063	500	4160	30 KV	480Y/277	150	3300	2 +/- 2-1/2%	3100	35x42x30
1091-0019	750	4160	30 KV	480Y/277	150	3300	2 +/- 2-1/2%	4000	40x47x32
1091-0161	1000	4160	30 KV	480Y/277	150	3300	2 +/- 2-1/2%	5200	39x56x34
1091-0083	500	12470	60 KV	480Y/277	150	3300	2 +/- 2-1/2%	3600	36x50x36
1091-0211	750	12470	60 KV	480Y/277	150	3300	2 +/- 2-1/2%	4800	37x54x38
1091-0076	1000	12470	60 KV	480Y/277	150	3300	2 +/- 2-1/2%	5500	39x 59x39