



THAI PATANAKIT
TRANSFORMER

บริษัท ไทยพัฒนกิจหม้อแปลงไฟฟ้า จำกัด

Powering Your Business

THAI PATANAKIT TRANSFORMER



www.thaipatanakit.co.th





COMPANY BACKGROUND

THAIPATANAKIT TRANSFORMER Co; Ltd. was established in 1984 under the name of **"SAHAPATANAKIT TRANSFORMER LIMITED PARTNERSHIP"**

Initially, over 30 years ago, a company called Sahapatanakit Co. Ltd. was established. It's mission was to manufacture, service and install transformers, as well as other forms of electrical equipment. The company also focused on manufacturing switchboards and had a base of expertise and engineering teams that were at the forefront of the electrical transformer industry at that time.

This company continued to grow and expand and in 1990, with increased registered capital, built a new factory that specialized in manufacturing transformers and collateral high quality equipment for the government and private sectors under the name of "THAIPATANAKIT TRANSFORMER Co. Ltd."

In 2012 ,ThaiPatanakit Transformer has also expanded our business by joint venture with our partner in Laos and build a factory to manufacture transformer for Laos market as well as building a 2700 square meters new factory in Chachoengsao Province to expand the production capacity.

OUR GOAL

At ThaiPatanakit, our goal is to play a large part to the wellbeing of our local community's and manufacturing products that meets international industrial standards.

We value the importance of both employee and customer relations and personal customer relations, resulting in a win-win for all stakeholders, which include our workers, our customers and our suppliers.



OUR QUALITY

Quality transformers come from high efficiency design, quality material, production process and quality control. We have over 50 years of experience to consider all the important elements involved in making quality transformers. ThaiPatanakit Transformer Co. Ltd. has been improving our designs to increase transformer efficiency and quality and continues to be committed to negotiating and selecting only the high grade quality raw materials and resources from grain oriented silicon steel and copper wire, mineral oil, and accessories. What this means is that you are guaranteed the high standard of quality.

ThaiPatanakit Transformer Co; Ltd. is awarded the Certificate of Approval for Thai Industrial Standards (TIS) and Quality System for ISO 9001 from the Bureau Veritas Certification using the Accreditation by NAC and UKAS. The Company's transformers have passed "short circuit" test from the most well known international laboratory "KIMA" as well as EGAT.

Our transformers are also certified by government agencies such as The Electricity Generating Authority of Thailand (EGAT), the Metropolitan Electricity Authority, Provincial Electricity Authority and the Faculty of Engineering of Chulalongkorn University. The Company's transformers have also been recognized for being in accordance with Thai Industrial standard and applicable specifications for IEC, ASTM, VDE etc.

MILE STONES AND CERTIFICATES

- A family business established in 1984
- 52 years of experience since our work with "Siriwiwat 2515 Co.,Ltd." whom established the 1st transformer standards for Thailand's National Grids.
- Expand from manufacturer, maintenance and service of industrial electrical transformers to include both government and private commercial/residential sectors.
- Entering to neighboring markets including Laos, Cambodia, Myanmar and Vietnam
- 1990 invested in a new factory in Samut Prakan to increase production capacity.
- Grown to 200+ staff
- 2012 Joining with our partner "Saiton Electric Laos PDR" to found Lao Patanakit Transformer Co.,Ltd.
- 2013 Increase register capital to 100,000,000 to expand production capacity by building a 2,700 SQM factory in Chachoengsao Province.

WE OFFER



CUSTOMIZATION

In today's new business climate, we are building one solution for one customer, includes turnkey installations, special on-load tap changing transformers, low voltage dry type transformer, and other specialty type transformers. Our commitment to finding niche items to provide to our ever increasing customer base is absolute!



EASE OF DOING BUSINESS

Here at ThaiPat we strive to make it easy for our customers. We offer terms, we give great customer service, we stick by our warranty, we handle trucking, and more importantly we do what we say! We are here for our customers to give them what they need, when they need it. This means real-time inventory and 24/7 emergency sales & service.



SPEED

We have offered the quickest lead times on product delivery in the industry. We have always realized that quick quote turnaround plays a big part in reducing the customers waiting period. Today and in the future, the drive for speed will reach every facet of our business. Our success tomorrow will rely on the ability to continue to provide our products and services as expeditiously as possible. We are willing to do what it takes to meet our customers' expectations!

PRODUCTS AND SPECIFICATION

ThaiPatanakit Transformer provides over 40 years of excellent service in solutions for Urban, Industrial, and rural applications. ThaiPatanakit manufactures both single phase and 3 phase oil type distribution transformers for indoor applications, outdoor applications and application in the wind, solar and bio energy segments and EnviroTemp (FR3) Fluid filled transformers for special applications such as for indoor transformer that require higher level of fire safety.

WHY CUSTOMERS CHOOSE THAIPAT

1. Longer warranty period.
2. Free all parts and labor during warranty period.
3. Free delivery everywhere in Thailand.
4. Free Testing with PEA.
5. Free lifetime inspection
6. 100% copper coils.
7. 24/7 Emergency Service.

DISTRIBUTION TRANSFORMERS

Our standard transformers and high efficiency (Low Losses) transformers are manufacture based on IEC, ASTM, ANSI and TIS 384-2543 Standard as well as Provincial Electricity Authority of Thailand (PEA) and Metropolitan Electricity Authority of Thailand (MEA) requirements.





10 kVA -50 kVA 1 Phase Distribution Transformers
Hermetically Sealed without gas cushion

- Low Losses and Low temperature rise design
- 100% copper coils
- Round Tank made with 3 mm thickness steel
- High rust resistant Acrylic or Gloss Enamel Paint (Grey Ral 7036)



30 kVA-500 kVA 3 Phase Distribution Transformers

- Hermetically Sealed without gas cushion
- Low Losses and Low temperature rise design.
- 100% copper coils
- Steel tank with corrugated fin wall, 3mm-4.5mm thickness
- Tank cover mounted core coil assembly
- Top mounted HV and LV bushings
- With tap changer Arcing Horn, Pressure relief device
- High rust resistant Acrylic or Gloss Enamel paint



630 kVA-2000 kVA 3 phase Distribution transformers

- Open Type with oil conservator tank
- Low Losses and Low temperature rise design.
- Rectangular Tank (6 mm) with pressed steel radiator fins
- Tap changer, Arcing Horn, Pressure relief device
- Thermometer with contact and alarm
- Breather and Buchholz Relay
- Acrylic or Gloss Enamel paint



2500 kVA and larger

- Open Type with oil conservator tank (Hermetically Sealed Type also available)
- Low Losses and Low temperature rise design
- Rectangular Tank (4.5-6 mm) with corrugated fin wall
- Tank cover mounted core coil assembly
- Top Mounted HV and LV bushings
- With tap changer, Arcing Horn, Pressure relief device and Thermometer (800 kVA and above)
- Breather with Silica Gel
- High Rust Resistant Acrylic or Gloss Enamel paint



OTHER SPECIAL TRANSFORMER

Power Transformer with On Load Tap changer: For many power transformer applications, a supply interruption during a tap change is unacceptable for example for energy selling business. We sold many power transformers with on-load tap changers to customers such as Petro Green, Erawan Sugar, Phuket Municipality etc.

We design our transformer to last not just to pass the efficiency test ! Our transformers are manufacture in ISO9001 certified factory.

- Special software to design and test
- Use of high grade material
- Short Circuit proof. KEMA tested
- Leak Proff-100 percent oil leakage test
- Low Magnitizing current
- Low no-load and load losses
- Low noise level



PRODUCT SCOPE

- Wide range of power ratings, from 40 VA to 2 MVA
- Single-phase range from 40 VA-30 kVA
- Three-phase range from 30 kVA-2500kVA
- Typical voltage up to 1000 V
- For 50 Hz and 60 Hz applications or for higher frequency applications
- Cooling: AN, AF
- Class A, B,F and H

2.1 AUTO TRANSFORMER

Autotransformers refer to those transformers where the primary and the secondary winding of the transformer are connected to each other, physically and magnetically. In another words, in an autotransformer, part of the windings is common to both primary and secondary. Autotransformers are used quite extensively in bulk power transmission systems because of its ability to multiply the effective KVA capacity of a transformer. Autotransformers are also used on radial distribution feeder circuits as voltage regulators. Designed and tested according to IEC61558/IEC60076-1 standards or as specified by customers

2.2 ISOLATION TRANSFORMER

Isolation transformers work in a similar manner as conventional dry-type transformers. However, instead of containing just the primary and secondary windings, an isolation transformer also contains electromagnetic (EMT) shield at the transformer's core to help protect the equipments that the transformer is connected to. The shield works by preventing any high frequency noise or signals, from the primary side, from being inducted into the secondary winding and any sensitive equipment that may be connected to the systems. Designed and tested according to IEC61558-2-6:2009 or as specified by customers.

LOW VOLTAGE DRY TYPE TRANSFORMER

We manufacture both Auto Transformer or Isolate Transformer. Our low voltage dry-type transformers are developed, manufactured and tested in accordance with relevant EC directives, European standards and VDE regulations, in particular DIN EN 61558. Our transformers are used in many standard and special applications, in commercial buildings, in the airports or in deep mines and industrial environments such as for machines import from Japan or from North America. Transformers with higher power rating are usually protected in appropriate enclosures. Air ventilation. Degrees of protection: IP 00, IP 20/IP 23 with steel-sheet enclosure, IP 54 with air/water heat exchanger or as oil transformer.

TESTING



Every transformer has to undergo the following measurements and tests prior to delivery Following completion of the test program, ThaiPatanakit Transformer provides a written report detailing the results of the tests. These test reports provide a baseline for the new transformer and should be retained as a reference for future routine maintenance tests. ThaiPatanakit Transformer ensures that measuring equipment is calibrated regularly to national traceable standard instruments.

ROUTINE TEST

- RATIO, POLARITY AND PHASE RELATION TESTS
- WINDING RESISTANCE TEST
- NO-LOAD LOAD LOSS AND EXCITING CURRENT TEST
- LOAD LOSS AND IMPEDANCE TESTS
- DIELECTRIC TESTS
- SEPERATED SOURCE VOLTAGE WITHSTAND TEST (APPLIED POTENTIAL TEST)
- INDUCED VOLTAGE TEST
- INSULATION-RESISTANCE TEST(MEGGER TEST)
- OIL DIELECTRIC STRENGTH TEST
- OIL LEAKAGE TEST AND TANK PRESSURE TEST

OTHER TESTS

- REGULATION AND EFFICENCY
- TEMPERATURE RISE TESTS
- SOUND LEVEL TEST
- INSULATION POWER FACTOR

REPAIR SERVICES AND RENTAL



REPAIR

ThaiPatanakit Transformer has the capability to repair most brands and types of oil filled transformers and low voltage dry type transformer as well as failure analysis of customer equipment. We have full time engineering staff for consultation.

- Transformer Reconditioning/Overhauling
- Full Electrical Testing
- Failure Analysis
- Field Service

FIELD SERVICE

- Complete Oil Analysis
- Transformer cooling oil changing and vacuum oil filtration.
- Complete Transformer Testing
- Leak Repair and Gasket Replacement on Distribution and Power Class Units
- Custom Buss Modification and close coupling of gear
- Components (tap changers, bushings, gauges, fans, bay-o-net, inserts, etc..)
- Retro filling of NON PCB units
- Turnkey Fitting Includes Rigging, Testing, installation and Disposal of Old Unit
- Hard to find parts and accessories
- Resistance, TTR and power factor testing



RENTAL AND LEASING

We have wide range of rental units for your emergency use, short-term and long-term rental and leasing.

RECONDITIONING TRANSFORMER (SECOND HAND)

We have wide range of tested reconditioned units in stock.

- All equipment fully tested and painted
- Warranty for all reconditioning units

TRANSFORMER PARTS AND COMPONENTS

We have stocks of different type of transformer and high voltage components.

- Arresters - Distribution
- Bushings - Distribution, Power and Custom Made Retrofit
- Gauges - Liquid Level, Liquid Temp, Winding Temp, Pressure Vacuum, Sudden Pressure Rise Relays, Pressure Relief Device
- Fans - For Dry Type or Liquid Filled Units
- Transformer Fluids – Mineral non PCB Oil, FR3, Silicone, R-Temp, BetaRubber Goods - Inserts, Feed-Thru-Inserts, Elbows
- Cords and Connectors
- Replacement Radiators
- Fuses
- Silica Gel/Breather

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KEMA 



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