



Registered by ISO Registrations Inc.

TRANSFORMERS CATALOGUE



Kumkang Transformer Co.

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1. About Kumkang

- Introduction
- History
- Company Value
- Organization Chart
- KCT at a Glance
- Worldwide Experiences

Introduction

Kumkang Transformer Co. established in 1985, is one of the leading manufacturer and exporter of transformer in Korea.

We are able to supply Power and Distribution Transformers, Pole Mounted Transformers and Pad Mounted Transformers.

With over thirty years of technical know-how and experiences, We have been supplying high quality transformers to KEPCO(Korea Electric Power Corporation) and abroad. We have enjoyed a high reputation among our customers owing to the high quality, competitive prices, prompt delivery and excellent service.

Our products have been exporting to Japan, Singapore and the Philippines.

We manufacture our products in accordance with a number of Internationally accepted quality standards including ISO9001:2008 and ISO14001:2004.

Manufacture of high quality, energy-saving and eco-friendly transformers are powerful guarantee of our reliable products.

Beside plenty products for your option, we also provide full design solution and technical support. You only need to tell us what you want, and our engineer will design for you providing whole set solution accordingly.

Our company focuses on the R&D and the best services for customers to ensure customer satisfaction.



History

Kumkang is the result of over 30 years' expansion and growth in Korea.

- 1985.03 Established KUKMIN Electric Co.
530 Dunchon-dong, Gangseo-gu, Seoul
- 1995.09 Move to the newly founded Factory
730-2 Sukmo-ri, Yangchon-myeon, Gimpo-si, Gyeonggi-do
- 2003.04 Moved to the newly founded Factory
361-8 Sukmo-ri, Yangchon-myeon, Gimpo-si, Gyeonggi-do
- 2003.05 Launched KUMKANG Transformer Co.
- 2006.12 ISO 9001:2008 Approved for Quality Management System
Certification No. : AR01-0619
- 2007.03 Registered Exempt Certificate of official routine test by KOEMA
(Korea Electrical Manufacturers Association)
Exempt No. 2007-GA-011
- 2010.12 Moved to the newly founded Factory
7-15 Ungyo-ri, Dunpo-myeon, Asan-si, Chungcheongnam-do
Factory Plottage : 10,735sqm / Mfg. Plottage : 2,542sqm
- 2014.04 KS Certificate Approved for Single Bushing Pole Transformer by KSA
(Korea Standards Association) – KSC 4306
- 2014.06 ISO 14001:2004 & KS I ISO 14001:2009 Approved
- 2014.07 Registered as a Vendor of KEPCO(Korea Electric Power Corporation)
 - Amorphous Core Type Pole Transformer
 - Anti-Pollution Type Pole Transformer
- 2014.08 Start supplying products to KEPCO
 - High Efficiency Pole Transformer(Mineral Oil/FR3)
 - PAD Mounted Transformer
- 2017.01 Moved to the newly founded Factory
214, Madogongdan-ro1-gil, Mado-myeon, Hwaseong-si, Gyeonggi-do, Korea
Factory Plottage : 12,200sqm / Mfg. Plottage : 6,729sqm

Company Value

Mission

Giving a top priority to customer satisfaction

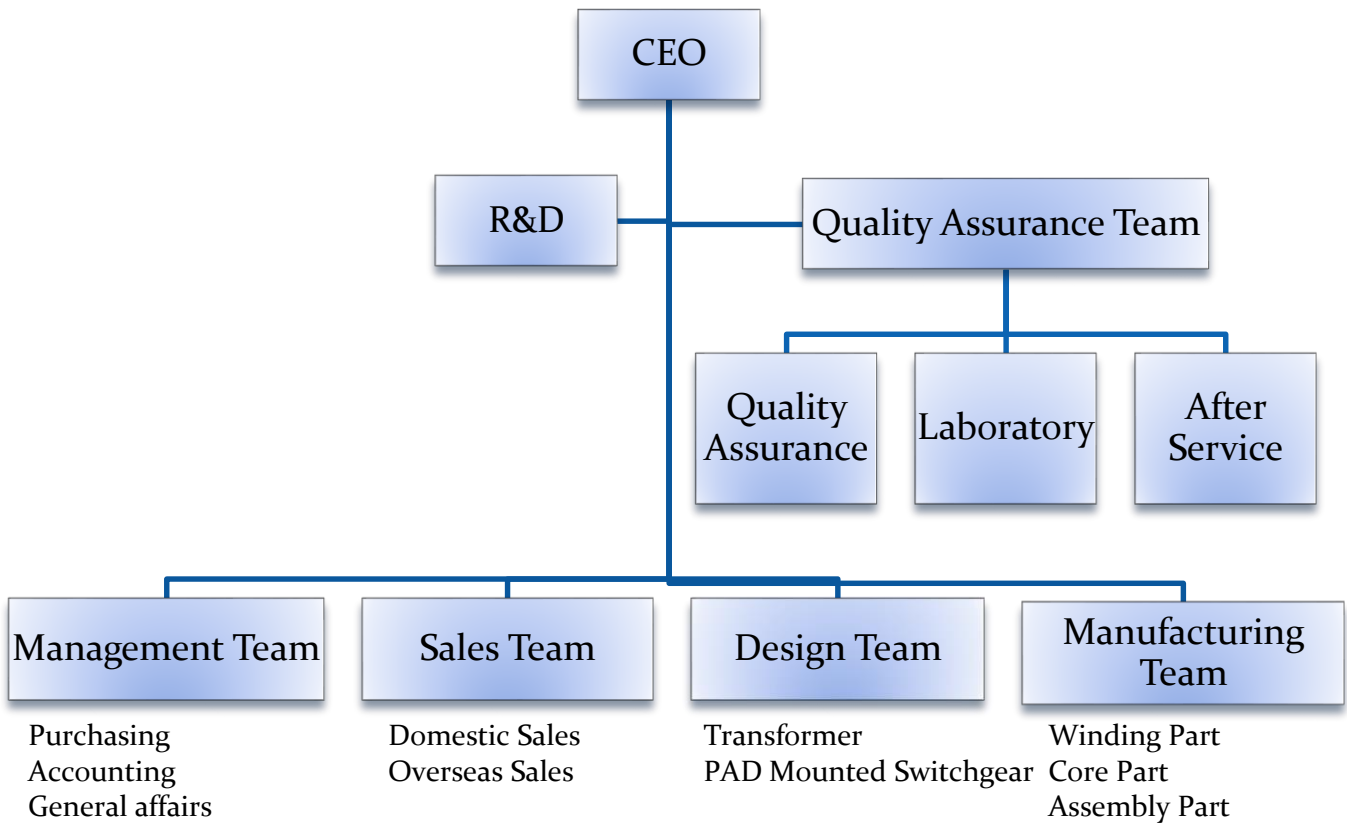
Commitment

Delivering quality products and services
at competitive prices

Value

Spirit to challenge the future

Organization Chart



Kumkang at a Glance

As of Dec. 31, 2016

Official Name	KUMKANG Transformer Co.
Headquarters	214, Madogongdan-ro 1-gil, Mado-myeon, Hwaseong-si, Gyeonggi-do, Korea
Business Type	Manufacture of Transformer and Trade
Main Products	Power & Distribution Transformers, Pole Mounted Transformers, Pad Mounted Transformers
Established Year	1985
Employees & Staff	39 (R&D Employee : 3 / QC Employee : 5)
Annual Sales	US\$5.3Million
Export Amount	US\$402,800
Export Percentage	7.6%
Certifications	KS(Korea Certification), ISO 9001, 14001



Worldwide Experiences

Kumkang transformers have been supplied to some countries all over the world and have achieved a world-wide reputation for their quality and performance to the customer's satisfaction.



Worldwide Experiences

Countries	Year	Customers	Ratings	Voltages	Qty
Indonesia	2013	Heune-A	3Φ 500kVA ~ 2500kVA	3.3kV/0.38kV	4
Malaysia	2013	Moondo	3Φ 150kVA	13800V/440V	1
Mongolia	2013		3Φ 160kVA	1000V/400(Y)V	1
Vietnam	2013	Posco	3Φ 500kVA ~ 1000kVA	22kV/6.6kV	3
Singapore	2014	Poly	3Φ 850kVA ~ 1100kVA	415V/220V	4
Singapore	2015	Poly	1Φ 37kVA 3Φ 35kVA	2400V/240V 2400V/240V	2 2
Philippines	2013	WIS&GB	1Φ 10kVA ~ 100kVA	13200.7620V/240.120V	87
Philippines	2013	COSINE	1Φ 10kVA ~ 100kVA	13200.7620V/240.120V	284
Philippines	2014	COSINE	1Φ 10kVA ~ 50kVA	13200.7620V/240.120V	180
Philippines	2015	COSINE	1Φ 10kVA~50kVA	13200.7620V/240.120V	236
Philippines	2014	JERA	1Φ 10kVA ~ 25kVA	13200.7620V/240.120V	159
Philippines	2015	JERA	1Φ 10kVA~100kVA	13200.7620V/240.120V	300
Philippines	2016	JERA	1Φ 10kVA~333kVA	13200.7620V/240.120V	381
Malawi	2016	SONGDOH CO., LTD.	3Φ 50kVA~100kVA	33000V/400.230V	34
Malawi	2016	SONGDOH CO., LTD.	3Φ 200kVA~1000kVA	11000V/400.230V	6
Japan	2016	ODM(oo太陽光)	3Phase 50kVA (60Hz)	22kV/210.105V	3
Japan	2016	ODM(oo太陽光)	3Phase 50kVA (50Hz)	22kV/210.105V	1

Domestic Market (KEPCO)

Type	Phase	Rating	Voltage	Qty	Customers
Pole Mounted Transformer	Single	30kVA 50kVA 75kVA 100kVA	13200V/230V	2083	KEPCO (Korea Electric Power Corporation)
Amorphous Core Type Pole Transformer	Single	10kVA 20kVA 100kVA	13200V/230V	1487	
Anti-Pollution Type Pole Transformer	Single	20kVA 30kVA 50kVA 75kVA 100kVA	13200V/230V	915	
High Efficiency Pole Transformer (Mineral Oil)	Single	20kVA 30kVA 50kVA 75kVA 100kVA 167kVA	13200V/230V	933	
High Efficiency Pole Transformer (FR3)	Single	20kVA 30kVA 50kVA 75kVA 100kVA 167kVA	13200V/230V	385	
PAD Mounted TR	Three	300kVA	22900V(Y)/230V	30	

Domestic Market

Type	Phase	Rating	Voltage	Customers
Oil Immersed TR	Three	10MVA	6600V/3300V	SN Heavy Industry Co., Ltd.
Oil Immersed TR	Three	3MVA	33kV/170-500V	Hansung Co., Ltd.
Oil Immersed TR	Three	6000kVA	22.9kV/3.3kV	CJ Lion Co., Ltd.
Oil Immersed TR	Three	4500kVA	22.9kV/3.3kV	Nas Tech Co., Ltd.
Oil Immersed TR	Three	3000kVA	6.6kV/6.6-4.2-3.3kV	Hansung Co., Ltd.
PAD Mounted TR	Three	400kVA	6.6kV/380-220V	Seoul Airport
Dry Type TR	Three	50kVA	480V/380-220V	Hansung Co., Ltd.
Oil Immersed TR	Three	300kVA	6.6kV/480-277V	Agency for Defense Development(ADD)
Oil Immersed TR	Three	1000kVA	22kV/575-332V	Sampyo Co., Ltd.
Oil Immersed TR	Three	850kVA	22kV/380-220V	Mire Airport
Oil Immersed TR	Three	850kVA	22kV/440V	STX Metal Co., Ltd.
Oil Immersed TR	Three	1700kVA	22kV/580-335V	Kyungdong Co.
Oil Immersed TR	Three	1500kVA	22kV/380-220V	Deabo Co., Ltd.
Oil Immersed TR	Three	300kVA	22kV/380-220V	Rexcon Co., Ltd.
Oil Immersed TR	Three	750kVA	22kV/440V	Dinbi Co., Ltd.
Oil Immersed TR	Three	1250kVA	22kV/380-220V	Sejin Co., Ltd.
Oil Immersed TR	Three	3300kVA	22.9kV/3.3kV	Yesan Co., Ltd.
Oil Immersed TR	Three	600kVA	22kV/220V	Taekyung Co., Ltd.
Oil Immersed TR	Three	2500kVA	22kV/440-254V	Temi Co., Ltd.

The rest is omitted.



2. Major Facilities

- Manufacturing Facilities
- Testing Facilities

Manufacturing Facilities

KUMKANG designs and manufactures our critical facilities in-house in order to meet our customer's specific requirements. We are continuously improving the automated equipment in production to ensure the reliability and stability of products.



Vacuum Transformer Oil Purification System

Vacuum oil purification systems are commonly used for removing moisture from oil. Removing all impurities, moisture from dielectric insulating oil will result in the improvement of the insulating oil of transformers.



Coil Winding Machine

This machine is suitable for coil winding both round wire and flat wire. Kumkang has developed coil winding machine with programmable functions so that best quality of coils can be wound with high accuracy and high repeatability.



Core Cutting and Forming Machines for Wound Core

The line is composed of un-coiler, cutting machine, staking unit, magnet separator, forming machine, control panel, Annealing furnace. This is a core processing step that cuts the core with flexible programming of multiple cut widths and form.



VPI(Vacuum Pressure impregnation)

VPI is a process by which a fully wound coil is completely submerged in a varnish. A varnish impregnated coil improves the overall insulation resistance of the transformer and hence the life of the transformer is improved.

Testing Facilities

Kumkang has a rigorous quality control applied on its raw materials, which are evaluated on Kumkang own laboratories, also applying tests in 100% of the parts manufactured, by electrical routine tests and type test according with ANSI, IEEE and IEC standards.

Standard Tests

Each unit manufactured is subjected to the following tests:

- Visual Examination
- Ratio
- Applied voltage test
- Induced voltage test
- Winding Resistance
- Angular Displacement or polarity
- No Load Losses, Load Losses
- Impedance
- Temperature Rise

Optional Tests

- Insulation Oil test
- Lightning Impulse
- Audible Sound Level



CPC 100 Standard Package (order no. VE000611)

All-in-One Test System

Kumkang offers field test to enhance customer satisfaction. The test system replaces numerous individual testing devices.

Field testing capabilities include;

- Ratio
- Winding Resistance
- Short-circuit impedance
- Leakage Reactance



3. Products

- Products Range
- Oil Immersed Transformer
- Construction
- Standard Accessories

Products Range

Kumkang transformers are individually designed and manufactured to meet and exceed the highest industry standards and the exact specifications for the particular application involved. They are not stock units modified or customized to meet minimum specifications.



Power & Distribution Transformer

The rich experience and knowledge of Kumkang we have accumulated in the oil immersed transformer industry ensures us to catch your requirements quickly. We manufacture in the medium to high voltage range from 50kVA up through 50MVA class in single and 3-phase ratings.



Pole Mounted Transformer

Kumkang's pole-mounted distribution transformers are mounted above ground on poles. These transformers typically service urban and rural residential and commercial loads. Kumkang manufactures pole mounted transformers to meet power requirements from 10kVA to 333kVA and covering voltages up to 34.5kV.



Pad Mounted Transformer

Kumkang manufactures a complete line of pad-mounted distribution transformers designed to provide the features, performance and aesthetics needed for modern underground residential applications.



Dry Type Transformer

Kumkang offers a full range of dry-type transformers with primary voltages through 72.5 kV built according to all major standards including ISO and ANSI. These transformers meet strict parameters with respect to electrical system demands and functioning in areas with extreme climatic conditions.

Oil Immersed Transformer

Power Transformer

▪ Standard Specification

Applicable Standards	ANSI C57, IEC 60076, JEC-2004
Number of Phase	Single Phase or 3Phase
Frequency	60 Hz or 50 Hz
Primary Voltage(H.V)	Up to 69kV
Secondary Voltage(L.V)	
Rating	Up to 50MVA
Tap Changer	On Load Tap Changer
Cooling Type	ONAN or ONAF or OFAF



• Characteristics & Dimensions

Rating (kVA)	Energy Efficiency (%)	Voltage Regulation (%)	No-Load Current (%)	Dimension(mm)			Oil (ℓ)	Total Weight (kg)
				W	D	H		
5000	98.70	1.40	2.50	3200	2650	3100	6200	18000
7500	98.90	1.35	2.30	3250	2800	3300	7200	22000
10000	99.10	1.30	1.80	3500	3000	3400	9300	26000
15000	99.30	1.20	1.50	3600	3500	3600	9800	29000
20000	99.30	1.00	1.30	3800	3400	3700	11000	36000
25000	99.40	1.00	1.30	3900	3800	3900	14000	41000
30000	99.40	0.90	1.20	4000	3900	3900	16400	48000
40000	99.50	0.85	1.10	4000	4200	4000	18500	55000
50000	99.50	0.85	1.10	4400	4300	4300	20000	63000

※ The above specifications and dimensions may be changed due to customer's request or quality improvement.

Oil Immersed Transformer

Distribution Transformer



Standard Specification

Applicable Standards	ANSI C57, IEC 60076, JEC-2004
Number of Phase	Single Phase or 3Phase
Frequency	60 Hz or 50 Hz
Primary Voltage(H.V)	Up to 34.5kV
Secondary Voltage(L.V)	120/240~
Rating	Up to 20MVA
Off-Load tapping on HV1	±0.5% 5TAP
Cooling Type	ONAN or ONAF

Characteristics & Dimensions

Rating (kVA)	Energy Efficiency (%)	Voltage Regulation (%)	No-Load Current (%)	Dimension(mm)			Oil (ℓ)	Total Weight (kg)
				W	D	H		
100	97.6	1.9	6.0	1060	770	1330	195	350
150	97.7	1.8	6.0	1130	900	1340	300	850
200	97.8	1.7	5.5	1115	1005	1340	350	900
250	97.9	1.7	5.5	1165	1135	1360	380	1000
300	98.0	1.6	5.0	1120	1030	1410	400	1200
400	98.1	1.6	4.5	1165	1120	1470	500	1400
500	98.2	1.5	4.5	1230	1250	1480	600	1600
750	98.3	1.4	4.0	1315	1495	1570	700	2300
1000	98.4	1.4	4.0	1410	1560	1630	850	2950
1500	98.5	1.3	3.5	1750	2050	1950	1400	4000
2000	98.6	1.3	3.5	1900	2300	2000	1800	4700
3000	98.6	1.45	3.0	1890	2600	2440	2600	6000
4000	98.7	1.40	2.5	2120	2800	2740	3200	8000

※ The above specifications and dimensions may be changed due to customer's request or quality improvement.

Oil Immersed Transformer

Pole Mounted Transformer



Standard Specification

Applicable Standards	ANSI C57, IEC 60076, JEC-2004
Number of Phase	Single Phase
Frequency	60 Hz or 50 Hz
Primary Voltage(H.V)	Up to 34.5kV
Secondary Voltage(L.V)	120/240~
Rating	5kVA ~ 333kVA
Off-Load tapping on HV ₁	± 0.5% 5TAP

Characteristics & Dimensions

Rating (kVA)	Energy Efficiency (%)	Voltage Regulation (%)	No-Load Current (%)	Dimension(mm)			Oil (ℓ)	Total Weight (kg)
				W	D	H		
10	97.8	3.0	1.9	375	540	890	30	110
15	98.1	3.0	1.8	390	560	940	32	140
25	98.4	2.8	1.7	495	680	1020	65	200
37.5	98.6	2.6	1.6	520	680	1020	72	230
50	98.7	1.9	1.5	590	690	1070	89	290
75	98.8	1.8	1.4	680	760	1080	101	400
100	98.8	1.7	1.3	730	760	1150	115	180
167	98.8	1.6	1.2	750	790	1180	160	600
250	98.9	1.5	1.1	970	940	1340	240	1000
333	98.9	1.4	1.0	1030	950	1390	270	1150

※ The above specifications and dimensions may be changed due to customer's request or quality improvement.

Oil Immersed Transformer

PAD Mounted Transformer



Standard Specification

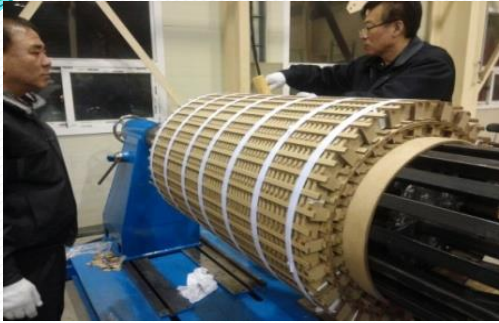
Applicable Standards	ANSI C57, IEC 60076, JEC-2004
Number of Phase	Single Phase or 3Phase
Frequency	60 Hz or 50 Hz
Primary Voltage(H.V)	Up to 34.5kV
Secondary Voltage(L.V)	120/240~
Rating	Up to 2MVA
Off-Load tapping on HV ₁	± 0.5% 5TAP
Cooling Type	ONAN or ONAF

Characteristics & Dimensions

Rating (kVA)	Energy Efficiency (%)	Voltage Regulation (%)	No-Load Current (%)	Dimension(mm)			Oil (ℓ)	Total Weight (kg)	
				W	D	H			
1 Φ	30	97.9	1.7	1.7	1000	1000	950	200	600
	50	98.1	1.6	1.7	1000	1000	950	200	800
	75	98.1	1.6	1.7	1000	1000	950	200	720
	100	98.2	1.6	1.7	1000	1000	950	200	800
	150	98.2	1.6	1.7	1000	1400	1150	300	1200
	200	98.2	1.6	1.7	1000	1400	1150	320	1270
3 Φ	75	97.6	1.9	4.0	1500	1000	1400	400	1300
	150	97.7	1.8	4.0	1500	1000	1400	450	1550
	300	98.0	1.6	4.0	1500	1250	1400	550	2100
	500	98.3	1.5	4.0	1500	1250	1400	600	2500

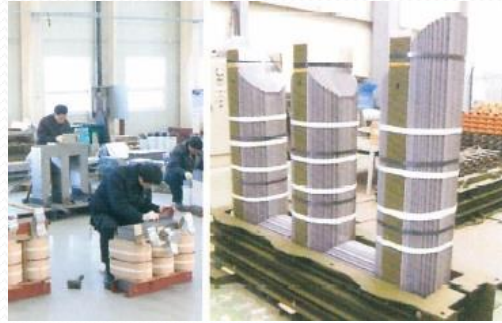
※ The above specifications and dimensions may be changed due to customer's request or quality improvement.

Construction



Winding

Winding are the most important parts of the electrical network of the transformer. It designed and manufactured to maintain a high dielectric strength using the quality of the conductor.



Core

Core is built with Cold Rolled Grain Oriented Silicon Steel, low loss silicon steel lamination. The core designed and manufactured to minimize vibrations and noise level.



Core-Winding Assembly

Core assembly stage are then taken into core-coil assembly stage. Primary and secondary windings are connected as per the requirements Connections to the tapping switch (if required) are made.



Drying Process

The core-coil assembly is taken out of the oven and the "Megger test" is carried out. Only if the megger value is as per the specification, the assembly may be taken for tank-up.



Tanking and Final Fitting

Dried out Core & Coil Assembly is put into the tank and oil is then allowed into the transformer tank under vacuum.



Testing

Kumkang conducts all routine tests, in accordance with the latest international standards on every transformer manufactured.

Standard Accessories

01



Pressure Relief Device(Auto Reset)

02



Pressure Relief Device

11



Buchhoiz Relay

12



Pressure Relief Device

03



Oil Level Indicator

04



Oil Level Indicator

05

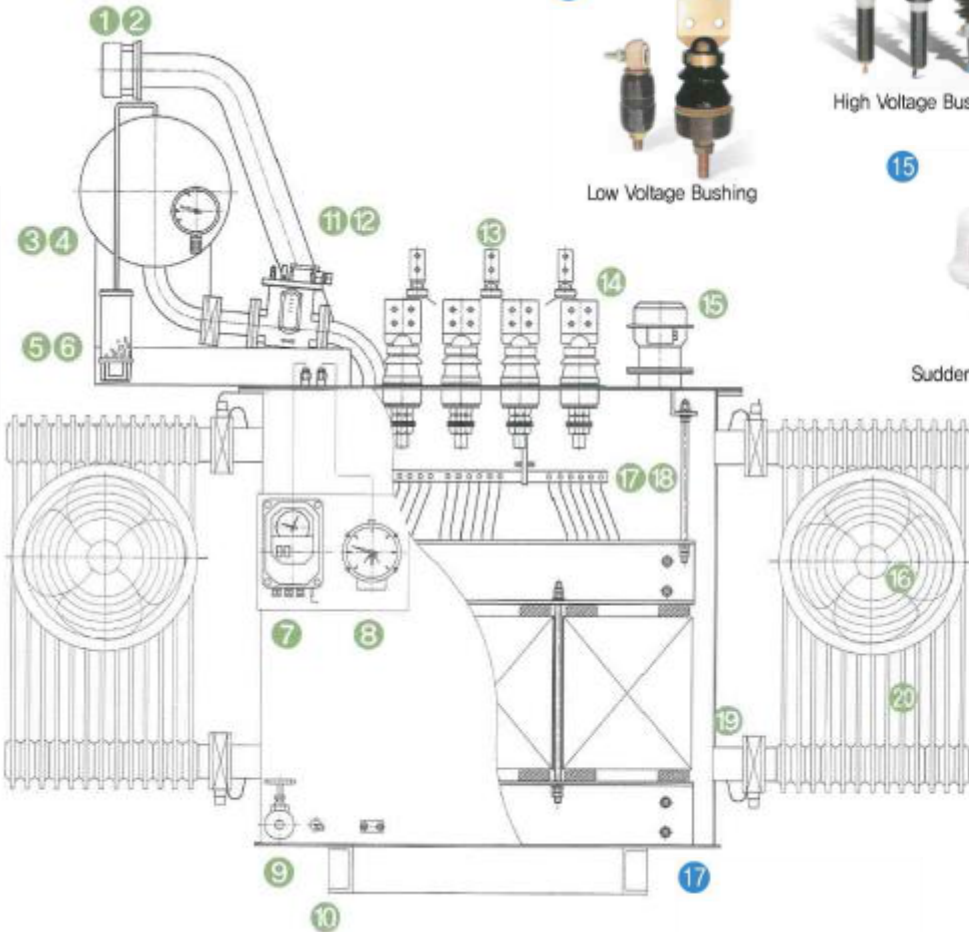


Dehydrating Breather

07



Winding Temp. Indicator



13



Low Voltage Bushing

14



High Voltage Bushing

15



Sudden Pressure Relay

08



Oil Temp. Indicator

09



Oil Drain Valve

10



Sampling Valve



No-Voltage Tap Changer

19



Radiator Valve

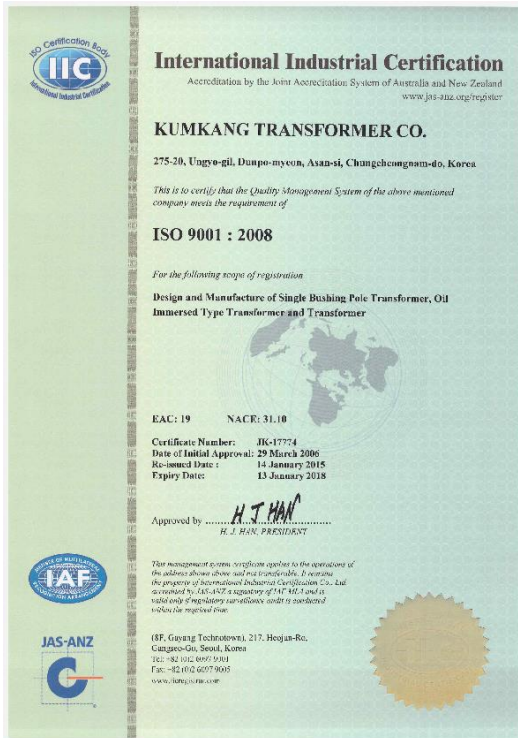


4. Certifications

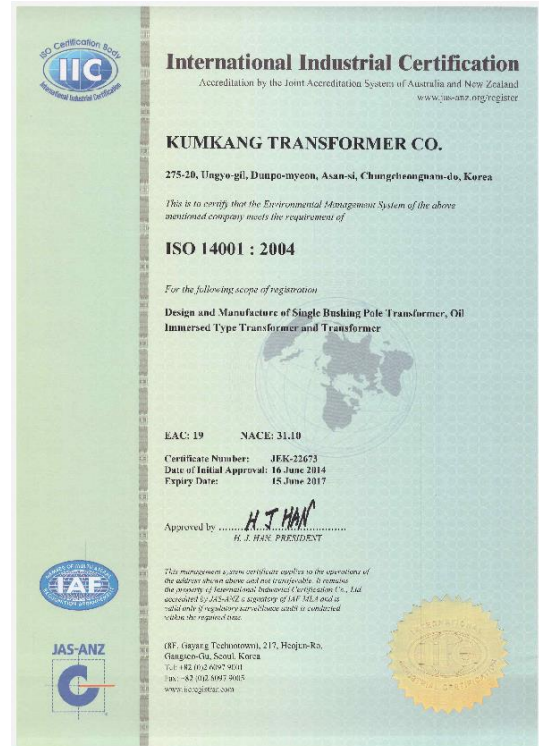
- Certifications
- Reference

Certifications

KUMKANG's products are accredited in accordance with the latest international standards.



- Name of Certification : International Industrial Certification(ISO9001:2008)
- Reference No. : JK-17774
- Start Date(validity period) : 2015.01.14
- End Date(validity period) : 2018.01.13



- Name of Certification : International Industrial Certification(ISO14001:2004)
- Reference No. : JEK-22673
- Start Date(validity period) : 2014.06.16
- End Date(validity period) : 2017.06.15

Reference

❖ Vendor Registration Certificate by KEPCO(Korea Electric Power Corporation)

Vendor (Supplier) Registration Certificate		
Company Name	KUMKANG TRANSFORMER	
President	LIM, JONGBO NG	Incorporation no. 640102-1000714
Address	273-20, Ungyo-bil, Dupo-myeon, Asan-si, Chungcheongnam-do, KOREA	
Person in charge		
NO	Name	Social Security Number
1	안영도	480125-*****
2	최병식	680201-*****
3	허득희	670119-*****
4	김상훈	800102-*****
5	서재경	760729-*****

Reminders
<p>When one of the items below applies to a registered supplier, the supplier's registration will be cancelled or suspended</p> <p>(1) If the supplier fails to take measures required by quality inspection or other related inspections (2) If a grave fault is found in the products delivered (3) If power supply is disrupted because of serious or repeated breakdowns caused by faulty products</p>

We certify the above-mentioned company is registered as KEPCO's qualified supplier.

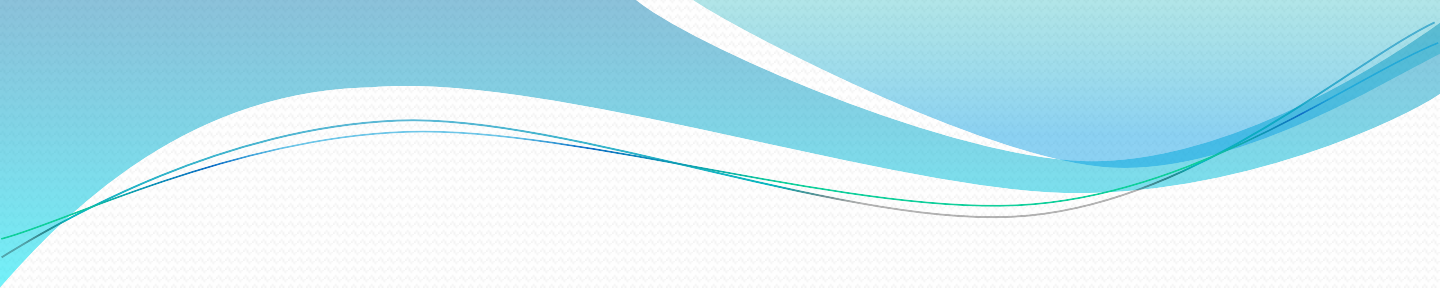
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Procurement & Contract Department
(☎ 02-8458-8987, 8940)

If found, please place this certificate in the nearest mailbox to ensure it will be returned.

Registered Products				
NO	Name of Product and Specification	Expiry Date	Class	Note
1	22.9kV General Type Pole Transformers(10~100kVA)	2018.07.22	Trust	
2		2018.07.22	Trust	



*Get in touch with one of our experts for information
about our transformers and certification services
or a request for quote.*

Kumkang Transformer Co.

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