Your Reliable Partner for Safety

GUJU

TECHNOLOGY

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Your Reliable Partner for Safety **GUJU** TECHNOLOGY

Our mission is to enhance safety, reliability, and efficiency
for generation and distribution of electricity
by achieving operational excellence, customer satisfaction,
and industry leading product quality.

ISO 9001

ISO 14001

ISO 45001

1990-2005

1992. 07
Establishment of GUJU Technology Service INC.

1993.11
Establishment of GUJU Technology INC.

1998. 08
Contract agreement as the exclusive agent in Korea with Curtiss-Wright Flow Control Corporation of USA

2003. 09
Completion of GUJU Chung-ju factory for Polymer Insulators and Power Protection Devices

2003. 10
Obtained ISO 9001 Certificate by BSi-Korea

2004. 05
Establishment of R&D Institute (Chung-ju)

2004. 06
Development of Polymer Long Rod Insulator for Railway (Type T-M)

2004. 07
Development of Polymer Suspension Insulators for power distribution line (Type A-36kV, B-25kV, C-15kV)

2005. 03
Development of Polymer Long Rod Insulator for Railway (Type N-a)

2005. 04
Development of Polymer Bushing for Pole Transformer

2005. 06
Development of Polymer Arcing Horn for power distribution line

2006-2009

2006. 01
Development of Polymer Suspension Insulators for power transmission line (Type 115kV, 135kV)

2006. 03
Development of Polymer Suspension Insulators for Railway (Type 69kV, T-S#1, #2, #3)

2006. 07
Granted designation of a part-material specializing company

2006. 10
Development of Polymer LP Insulators for power distribution line (Type 25kV, 35kV)

2007. 03
Granted designation of a part-material specializing company

2007. 04
Granted designation of Innovative Management Small and medium business

2007. 06
Promising small & medium export company / Small and Medium Business Export Center of Chungbuk.

2007. 07
Construction contract with KHNP for KRN 1 opening seal

2007. 08
Construction contract with Hyundai E&C, DAELIM, and SK E&C for SKN 1&2 opening seal

2009. 04
Korea's first KRC certificate of Long Rod Insulator for subway / KORAIL

2010-2013

2010. 01
Registration on KHNP as a qualified supplier of maintenance construction

2010. 05
Inspection Service contract with Kocen for HUN 3&4 Firewall penetration seal

2010. 07
ISO 14001:2004 / BSI (British Standard Instituion)

2010. 08
Certificate of One-KEPCO export company

2010. 09
Brand Registration (GEOSEAL, GEOGROUT, GEOCOAT-GTI) / KIPO

2012. 08
Contract with KEPCO for UAE BARAKAH J239 SOV (TargetRock)

2013. 01
Registration on KHNP as a qualified supplier of Inspection service on firewall penetration & detailed design for construction of firewall penetration

2013. 02
Contract with KEPCO for UAE BARAKAH E248 Prefabricated Cable Assemblies(Qual-Tech NP)

2013. 04
MAIN-BIZ certificate / Small and Medium Business Administration

2014-2015

2014. 04
Business Registration in Engineering for Electricity and Industrial machinery) / KENCA

2014. 09
Development of Excellent Goods (Polymer-Insulator for High-Speed Railways) / Commendation from the Minister of Trade

2015. 03
OHSAS 18001:2007 Certification acquisition / BSI

2015. 04
Nuclear Technology Award Winner / Minister of Science, ICT and Future Planning
2015. 06. Contract of UAE BARAKAH NPP Units 1 & 2

2015. 07
Supply Contract with Daewoo Engineering & Construction Co., Ltd. JORDAN RESEARCH & TRAINING REACTOR PROJECT

2015. 08
Contract for the performance improvement of penetrations sealing of Hanul NPP Units 1 & 2/ KHNP

2015. 09
Contract for the performance improvement of penetrations sealing of Hanul NPP Units 1 & 2./ KHNP

2015. 11
Supply contract for high-density silicon (GEOSEAL150) and low-density silicon (GEOSEAL80) for Hanbit NPP Units 1 & 2

2016-2017

2016. 07
Development of aluminium cable terminating material (assembly type) and support (NSP-40)

2017. 01
Contract for the Performance Improvement of Penetrations Sealing of Wolsong NPP Units 2, 3 & 4 / KHNP

2017. 03
CEO changed to Choi, Jae Rim, the vice president

2017. 04
Construction Contract for CCW Sealings Repair Works of Hanbit NPP Units 3 & 4

2017. 06
Contract of UAE BARAKAH NPP Units 3 & 4

2017. 08
ISO 9001&14001 Certification Conversion to 2015 Edition

2017. 12
Contract for Opening and Penetrations Sealing of UAE BARAKAH NPP Units 3 & 4

2017. 12
Development of Aluminum Cable Straight Connectors (Self Shrinkage Type)

2017. 12
Achievement of $49 million in annual orders / Curtiss-Wright

2018. 03
Contract for the construction of hydrogen monitoring facility and penetrations sealing of SFP room

2018-2019

2018. 07
Selected as the best supplier in quality for Connectors / KEPCO

2018. 11
Reregistration in qualified suppliers of KHNP – On-site Investigation and Inspection Service of Firewall Penetrations / Detailed Design Service for Seal Construction

2018. 12
Reregistration in firewall penetrations sealing construction

2018. 12
Achievement of $22 million in annual orders / Curtiss-Wright

2019. 02
Registration for Plant Relocation to Naju

2019. 03
ISO 45001 : 2018 Certification acquisition

2019. 04
Change Registration of Qualified Supplier in KHNP – Plant Relocation to Naju

2019. 04
Registered as supplier of Opening & Penetration Seals in Shin-Kori Units 5 & 6

2019. 04
Development of Straight joint Material of Aluminum Cable (Self Shrinkage Type)

2019. 07
Approval for railway type (High Speed Rail, 9 kinds of General Railways)

2019. 07
Development of High Efficiency of pole transformer

2019. 08
Newly registered as qualified suppliers – Register Q grade suppliers for Firewall Penetration Seal Construction /KHNP

Nuclear Power Products & Services

Fire stop Materials

- Silicone based fire protection seal system for opening and penetration
- High density non-shrink grout qualified for Fire, Ventilation, Flood, Compartment Pressurization, and Radiation seals.

Engineering for Nuclear Power Plant

- Engineering & Evaluation Of Opening & Penetration Seal
- Evaluation & EQ for NPP(Electrical and Control)
- Inspection & Evaluation of painting
- Design for reflective metal insulator (RMI)

Agency

Agent for Nuclear Power Products & Services

- Qualtech NP
- Scientech
- Target Rock
- Enertech
- Rizzo International, Inc

CURTISS-WRIGHT

RIZZO INTERNATIONAL, INC.

Power Distribution Products

Transformer

- High Efficiency Pole Mounted Transformers
- Hybrid Bushing

Power Distribution Products

- Insulators for distribution & transmission Line
- Insulators for railways & high-speed train
- Lightning arresters and cut out switches
- Cable Connectors
- Metal accessaries

Switch Gears

- Gas Insulated Switches
- Load Break Switches
- Reclosers / Sectionalizers

Power Distribution Products

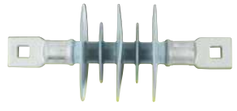
Through the research and development of electrical equipment (transmission/substation/distribution) facilities We continue to produce and sell them to Korea Electric Power Corporation, Korea Railroad Corporation, and the Korea Electric Power Corporation.

There is Cubicle type Gas Insulated Switchgear(GIS)of 25.8kV as a power protection facility for transmission/substation.

Circuit breaker for fault section and Recloser are available for maintenance, load break switch and automatic shutdown of overhead and underground line on distribution lines.

Also, we manufacture transformers for power supply including Bushing (Bushing, Bushingwell for pole and PAD Transformers) .

In addition, through steady technology development, our company supplies insulators with polymer materials for high voltage, lightning arrestors, fuses, connectors and cross arm.



SWITCHGEAR

SF6 Gas Insulated Switchgear - Cubicle Type

APPLICATION

- The C-GIS is designed for economical and reliable power distribution in substation. With its cubicle structure and highly reliable control system, the compact system is the best solution for service in private utility network and substation in industry and public buildings.
- All switching devices with interrupting, disconnecting andearthing functions are encapsulated in stainless steel enclosure with SF6 gas insulation.

CHARACTERISTIC

- Free of maintenance and reliable operation
- Digital controlled and protected
- Safety to operating personal
- Factory-assembled sections are delivered to the site C24
- Minimum installation space
- Capable of extension with existing systems
- Three-phase enclosure of the functional compartments

RATING

Rated voltage	kV	25.8
Rated short time withstand current	(kA/1sec, RMS)	25
Rated current	A	Busbar 2,000
		Feeder 630
Power frequency withstand voltage	kV	70
Impulse withstand voltage	kV	150
Rated interrupting current	kA	25
Standard operation obligation		O-0.3sec-CO-15sec-CO
Protection degree		IP65 / IP4X
Mechanical endurance	times	10,000
Applied Standard		IEC 62271-100, KEPCO std.

SF6 Gas Insulated Pad mounted Load Break Switch

APPLICATION

- The SF6 gas insulated pad mounted load break switch is designed to achieve optimum performance and reliability, making use of the latest technoloy in SF6 arc interruption with puffer principle.
- The switch is designed to meet the increasing requirements of the electric utility industry, providing a safe, low maintenance, long life, economical alternative device to perform load switching and data gathering on underground distribution lines.
- The switch is designed to be mounted on the concrete pad.

CHARACTERISTIC

- Maintenancefree
- Light weight and easy installation
- Measuring, status monitoring and control
- Safety devices(low pressure interlocking, pressurerelief,l ocking)

RATING

Rated voltage	kV	15 / 24(25.8) / 35(40.5)
Rated current	A	600
Rated short time withstand current	kA	12.5
Rated short circuit making current	kA, peak	32.5
Cy withst and voltage power frequen	kV	50/60/95
Impulse with stand voltage	kV	125/125/195
Rated load switching performance	times	200
Mechanical endurance	times	5,000
Weight (Automatic / Manual)	kg	450/320
Applied Standard		IEC 62271-103, KEPCO std.

SF6 Gas Insulated Pole mounted Load Break Switch

APPLICATION

- The pole mounted SF6-Gas insulated load break switch is designed to use an innovative
- The automatic model can be configured as a remote controlled switch.
- The integrated type controller includes RTU (remote control., status monitoring), metering (current, voltage, power factor, frequency, power, energy, counter) & recording (events, fault current waveforms, data logging).

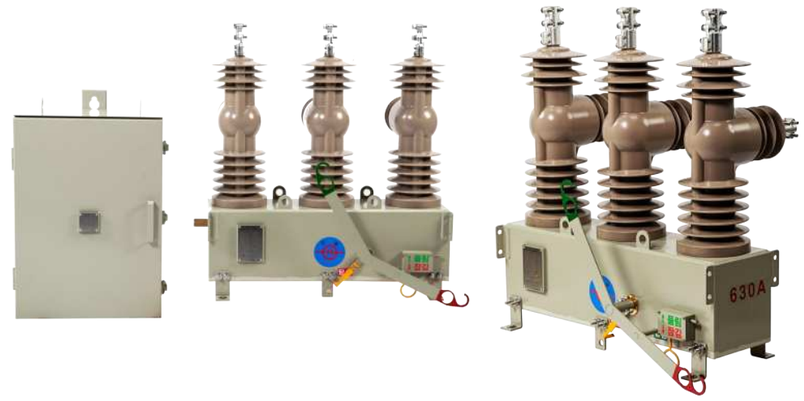
CHARACTERISTIC

- Maintenance free
- High reliability
- Easy installation with compact design
- Safety devices (low pressure interlocking, pressure relief, locking)

RATING

Rated voltage	kV	12(max.15) / 24(max.27) / 36(max. 38)
Ratedcurrent	A	400 / 630 / 800
Rated short time withstand current	kA, RMS	12.5 / 16 / 20
Rated short circuit making current	kA, peak	32.5 / 40, 5
Power frequency withstand voltage	kV	50 / 60 / 70
Impulse withstand voltage	kV	125 / 150 / 170
Manual / Automatic		Manual / Automatic
Mechanical endurance	times	5,000
Weight	kg	130, 145
Applied Standard		IEC 60265-1, IEC 62271-103, KEPCO std.

Eco Load Break Switch



APPLICATION

- ECO(EPOXY) Load Break Switch is designed by epoxy molded material - environment
- The integrated type controller includes RTU(remote control, status monitoring), metering(current, voltage, power factor, frequency, power, energy, counter) & recording (events, fault current waveforms, data logging).
- The automatic model can be configured as a remote controlled switch.

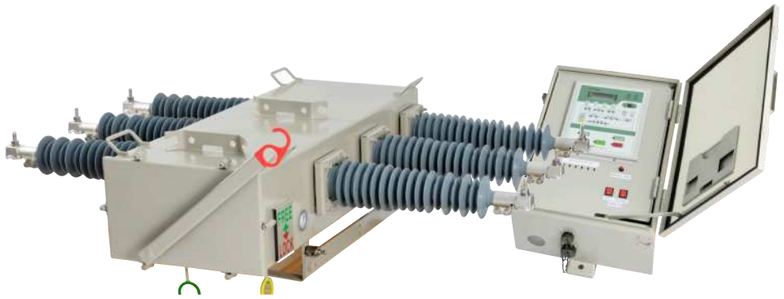
CHARACTERISTIC

- Maintenance free
- High reliability
- Easy installation with compact design
- Safety devices(low pressure interlocking, pressure relief, locking)

RATING

Rated voltage	kV	12(max. 15)/24(max. 27)
Rated active load interrupting current	A	400/630
Rated short-time current	kA	12.5
Rated short circuit making current	kA, peak	32.5
Rated power frequency withstand voltage	kV	50/60
Impulse withstand voltage	kV	125/150
Manual / Automatic		Manual/Automatic
Mechanical endurance	times	5,000
Weight(kg)Manual / Automatic	kg	110
Applied Standard		IEC 62271-103, KEPCO std.

SF6 Gas Insulated Sectionalizer



APPLICATION

- The SF6 gas insulated sectionalizer is designed for a self-contained, circuit-opening device used in conjunction with source-side protective devices, such as reclosers or circuit breakers, to automatically isolate faulted sections of electrical distribution systems.
- The sectionalizer has distinct application advantages
  - It can be applied between two protective devices having operating curves, which are close together. This is a vital feature in a location where an additional step in coordination is not practical or possible.
  - It can be used on close-in taps where high available fault current prevents coordination with fuses.
  - It has fault close and latch capability for any fault-closing operations.

CHARACTERISTIC

- Maintenance free
- High reliability
- Easy installation with compact design
- Safety devices (low pressure interlocking, pressure relief, locking)

RATING

Rated voltage	kV	12(max.15) / 24(max. 27) / 36(max.38)	
Rated current	A	400 / 630	
Rated short circuit making current	kA	10/12.5 / 16	
Power frequency withstand voltage	kV	50 / 60 / 70	
Impulse withstand voltage	kV	125 / 150 / 170	
Rated short time withstand current	kA	10 / 12.5 / 16	
Rated short circuit making current	kA, peak	26 / 32.5 / 40	
Minimum running current	A	Phase	50, 70, 100, 140, 200, 300, 400A (Block)
		Ground	25, 35, 50, 70, 100, 150, 200A (By Pass)
Rated short circuit breaking current	A	900	
Applied Standard		IEEE Std 37.63) / IEC60265-1, KEPCO std.	

SF6 Gas Insulated Vacuum Recloser

APPLICATION

- The SF6 gas insulated automatic recloser is designed for a use on overhead distribution lines as well as distribution substation applications.
- The magnetic actuator provides highly efficient, reliable performance while consuming very little energy.
- The controller is a microprocessor based controller that provides the protection, data logging and communications function.

CHARACTERISTIC

- Faultdetection&protection.
- Control&statusmonitoring
- Measurements (current, voltage, power factor, frequency, power, energy, counter)
- Recording (events, fault current waveforms, data logging)
- Safety devices (low pressure interlocking, pressure relief, locking)

RATING

Rated voltage	kV	12(max.15) / 24(max.27) / 36(max.38)	
Rated current	A	400 / 630 / 800	
Rated short circuit making current	kA, peak	32.5 / 40	
Minimum running current	A	Phase	10~1600A (step : 1A)
		Ground	2~1600A (step : 1A)
Rated short circuit breaking current	kA	12.5 / 16	
Power frequency withstand voltage	kV	50 / 60 / 70	
Impulse withstand voltage	kV	125 / 150 / 170(200)	
Manual / Automatic		Magnetic Actuator	
Mechanical endurance	times	5,000 / 10,000	
Weight	kg	160 / 160 / 300	
Applied Standard		ANSI C37.60, IEC62271-111, KEPCOstd.	

Pole Mounted Epoxy-Molded Vacuum Recloser

APPLICATION

- The Mold recloser combines the high reliability of vacuum interruption and high dielectric strength of encapsulated with cycloaliphatic epoxy, in a compact, maintenance-free unit. The magnetic actuator provides consistent performance and high reliability for distribution automation applications.
- The controller is a microprocessor based controller that provides the protection, and data gathering and communication function in the capacity of control devices inherently reliable and intelligent - Multi metering, RS232 ports, SEF protection, UVR/OVR(Option), UFR/OFR(Option) - Completely remotely access for recloser functions, setting, metering and data records.

CHARACTERISTIC

- Environmentally friendly
- No oil or gas (Solid insulation)
- Long mechanical and interrupting life
- Stainless steel permanently-sealed enclosure
- Built-in integrated sensors
- Fast autoreclosing capability

RATING

Rated voltage	kV	12(max. 15) / 24(max. 27) / 36(max. 38)
Rated current	A	400/630/800
Rated short circuit making current	kA	12.5/16
Power frequency withstand voltage	kV	50/60/70
Impulse withstand voltage	kV	125/150/70
Rated short circuit breaking current	kA	12.5/16
Rated short circuit making current	kA, peak	32.5/40
Minimum running current	A	Phase 10~1600A (step : 1A)
		Ground 2~1600A (step : 1A)
Manual / Automatic		Magnetic Actuator
Mechanical endurance	time	5,000/10,000
Weight	kg	190/190/280
Applied Standard		ANSI C37.60, IEC 62271-111

TRANSFORMER

High Efficiency Pole Transformers

APPLICATION

- High-efficiency main phase transformer with single-phase for use in 22.9kV-y 3-phase 4 wires multi-ground system.

CHARACTERISTIC

- High-efficiency Pole Transformer with characteristics that minimize power loss
- High temperature rise limit and slim design are not require the radiator (less than 100 kVA)
- Environmentally Friendly Products with Plants Oil

RATING

Capacity (kvA)	Efficiency (100%)	Voltageregulation (%)	No-loadcurrent (%)	No-load loss (W)	Loadloss (W-100% load)
20	min 98.61	Max 1.7	Max 1.0	Max 48	Max 232
30	min 98.71	Max 1.5	Max 1.0	Max 62	Max 327
50	min 98.83	Max 1.4	Max 0.8	Max 89	Max 501
75	min 98.92	Max 1.4	Max 0.8	Max 132	Max 681
100	min 98.99	Max 1.3	Max 0.7	Max 165	Max 851
167	min 98.68	Max 1.3	Max 0.7	Max 215	Max 2,003

Hybrid Bushing for Pole Transformer

APPLICATION

- Protects high voltage and low voltage side terminal of pole transformer.

CHARACTERISTIC

- Protects high voltage and low voltage side terminal of pole transformer
- Excellent impact resistance
- Prevent oil leakage
- High water repellency
- Light weight & Easy installation

RATING

Specifications		Units	Characteristics	
			High	Low
Rated current		A	40	500
Material		-	Porcelain/ silicone	Porcelain-FRP/silicone
Power frequency withstand voltage	dry	kV	42	15
	wet	kV	36	15
Lightning impulse withstand voltage (1.2 x 50㎲)		kV	125	-
Leakage distance		mm	770 ±40	-

Bushing, Bushingwell for PAD Transformers

APPLICATION

- Using for connection between a underground power cable and a transformer.

CHARACTERISTIC

- Excellent tightening
- Excellent endurance and insulation

RATING

Specification		Unit	Characteristics	
			Bushing	Bushing well
Rated voltage		V	400	25,800
Voltage(Max)	Phase-ground	kV	-	15.2
	Phase-phase	kV	-	26
Lightning impulse withstand voltage		kV	30	125
Power frequency withsagetand volt (1 min)		kV	10	40
Direct current withstand voltage (15 min)		kV	-	78
Partial Discharge		pC	-	3

POLYMER INSULATOR

Composite Dead-end/Suspension Insulators

APPLICATION

- Used in distribution lines and supports insulation of wires, having good electrical properties and high reliability compared to porcelane insulator.

CHARACTERISTIC

- Easy installation by light weight
- Excellent mechanical strength
- Excellent insulation in pollution environment
- High water repellency by using silicone
- Registered on KEPCO Qualified Supplier List

RATING

Specification		Unit	Characteristics		
			36kV(A)	25kV(B)	15kV(C)
Power frequency flashover voltage	Dry	kV	145	130	95
	Wet	kV	130	110	70
Lightning Impulse flashover voltage (1.2×50㎲)	Positive	kV	230	175	155
	Negative	kV	253	212	175
Specified mechanical load (SML)		kN	70	70	70
Section length		mm	525±25	430±20	330±15
Leakage distance		mm	760	580	425
Dry arcing distance		mm	320	280	210

Composite Line post Insulators

APPLICATION

- The wire Insulator supporting by installing it in the straight section of the distribution line.

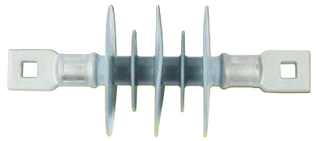
CHARACTERISTIC

- Excellent water repellency and ozone-proof
- Safety by excellent mechanical strength
- Easy to install by light weight

RATING

Specification		Units	Characteristics
Power frequency withstand voltage	Dry	kV	110
	Wet	kV	85
Lightning impulse flashover voltage (1.2×50μs)	Positive	kV	166
	Negative	kV	189
Specified cantilever load (SCL)		kN	12
Specified mechanical load (SML)		kN	12
Leakage distance		mm	712
Dry arcing distance		mm	264

Polymer Coupling Insulators



APPLICATION

- Polymer Insulator used to reinforce the insulation performance of the cos or lightning arrestor.

CHARACTERISTIC

- Reinforce insulation performance of COS and Arrester
- Light weight & easy installation
- Excellent mechanical strength
- Excellent insulation performance in contaminated environment
- Registered on KEPCO Qualified Supplier List

RATING

Specification	Units	Characteristics
Pollution-withstand voltage (ESDD 3.5 g/㎡)	kV	min 7
Power frequency withstand voltage (dry 1min)	kV	42
Lightning Impulse withstand voltage (1.2×50μs)	kV	125
Specified mechanical load (for Bending)	kN	9.8
Specified mechanical load (SML)	kN	9.8
Leakage distance	mm	min 420

Composite Suspension Insulators for Transmission Line

APPLICATION

- Used in super-high pressure machined power lines, substations station. It has better electrical properties and is more reliable than porcelane insulator.

CHARACTERISTIC

- Easy installation by light weight
- Excellent mechanical strength
- Excellent insulation in contaminated environment
- High water repellency by using silicone

RATING

Specification		unit	Specification		
			69kV	115kV	135kV
Power frequency flashover voltage	Dry	kV	235	365	420
	Wet	kV	200	355	400
Lightning Impulse flashover voltage (1.2×50μs)	Positive	kV	390	655	670
	Negative	kV	390	655	670
Specified mechanical load (SML)		kN	140	140	140
Section length		mm	780±25	1,210±25	1,330±25
Leakage distance		mm	1,795	2,762	3,110
Dryarcing distance		mm	610	972	1,090

Insulators for Railway / T-mx

APPLICATION

- Composite insulator applied to 25kV High-speed railway(T-mx).

CHARACTERISTIC

- Excellent insulating and mechanical properties
- High water repellency
- Light weight and easy installation
- Excellent insulation performance in contaminated environment

RATING

Specification	Units	Characteristics
Leakage distance	mm	min1,300
Specified cantilever load (SCL)	N·m	min4,000
Specified mechanical load (SML)	kN	90
Rated tensile load(RTL)	kN	45 (for ten seconds)
Power-frequency withstand voltage (wet)	kV	95
Lightning impulse withstand voltage (1.2×50㎲)	kV	250
Radio Interference Voltage	kV	27.5
	㎶ at 1000㎑	10

Insulators for Railway / NSP-40

APPLICATION

- Insulators used to support AT feeders and conductors in underground sections, tunnels, and bridges of railroad tracks (general and high-speed railways).

CHARACTERISTIC

- High water repellency
- Excellentinsulatingandmechanicalproperties
- Light weight and convenient construction by applying aluminum fitting
- Excellent insulation performance in contaminated environment

RATING

Specifications	Units	Characteristics
Leakage distance	mm	min 1,100
Specified cantilever load (SCL)	N	min 6,963
Rated tensile load (RTL)	N	39,227
Power-frequency flashover voltage (dry)	kV	200
Power-frequency flashover voltage (wet)	kV	150
Lightning impulse withstand voltage (1.2×50㎲)	kV	min 320
Radio interference voltage	r.m.s kV	25
	㎶ at 1000㎑	10

Insulators for Railway / NSP-50

APPLICATION

- Insulators used to support AT feeders and conductors in underground sections, tunnels, and bridges of railroad tracks (general and high-speed railways).

CHARACTERISTIC

- High water repellency
- Excellentinsulatingandmechanicalproperties
- Light weight and convenient construction by applying aluminum fitting
- Excellent insulation performance in contaminated environment

RATING

Specifications	Units	Characteristics
Leakage distance	mm	min 1,100
Specified cantilever load (SCL)	N	min 6,963
Rated tensile load (RTL)	N	39,227
Power-frequency flashover voltage (dry)	kV	200
Power-frequency flashover voltage (wet)	kV	150
Lightning impulse flashover voltage (1.2×50㎲)	kV	min 320
Radio interference voltage	r.m.s kV	25
	㎶ at 1000㎑	10

Insulators for Railway / SP-60

APPLICATION

- Insulators used to support AT feeders and conductors in underground sections and tunnels and bridges and other device insulation of railroad tracks (general and high-speed railways).

CHARACTERISTIC

- Insulator porcelain material
- Excellentinsulatingandmechanicalproperties
- Excellent insulation performance in contaminated environment

RATING

Specifications	Units	Characteristics
Leakage distance	mm	min 1,425
Specified cantilever load (SCL)	kN	min 7
Specified mechanical load (SML)	kN	80
Power-frequency flashover voltage (dry)	kV	245
Power-frequency withstand voltage (wet)	kV	140
Lightning impulse withstand voltage (1.2×50㎲)	kV	350
Specified torsional load	kN·m	min 4.5

Insulators for Railway / T-sx

APPLICATION

- It is used to distinguish 25kV high-speed railway tram lines and to suspend feeder lines, and has excellent insulation and mechanical properties.

CHARACTERISTIC

- Excellent insulation and mechanical properties
- High water repellency of Polymer material
- Convenient Construction with Light weight
- Excellent insulation performance in damaged enviroment

RATING

Specifications	Units	Characteristics
Leakage distance	mm	min 1,300
Specified mechanical load (SML)	kN	110
Rated tensile load (RTL)	kN	55(10 second)
Power-frequency withstand voltage (wet)	kV	95
Lightning impulse withstand voltage (1.2×50μs)	kV	250
Radio interference voltage	kV	27.5
	μV at 1000Khz	10

Insulators for Railway / N-a

APPLICATION

- It is used for Dead-and line and division point of 25kV tram lines, and has excellent insulation and mechanical properties.

CHARACTERISTIC

- Compositeinsulatorusingfor25kVrailwaytensioningposition
- Excellent insulation and mechanical properties
- High water repellency
- Excellent insulation performance in contaminated environment

RATING

Specifications	Unit	Rating
Leakage distance	mm	A-B : min 1,400 / C-D : min 240
Specified cantilever load (SCL)	N	min 1,863
Rated tensile load (RTL, 1 min)	N	54,917
Power frequency flashover voltage (dry)	kV	A-B : min 250 / C-D : min 80
Power frequency flashover voltage (wet)	kV	A-B : min 200 / C-D : min 55
Lightning impulse withstand voltage (1.2×50μs)	kV	A-B : min 400 / C-D : min 110

Insulators for Railway / T-m / T-ms

APPLICATION

- Used for operating bracket of 25kV high-speed rail tracks and has excellent insulation and mechanical features.

CHARACTERISTIC

- Composite insulator using for 25kV railway tensioning position
- Excellent insulation and mechanical properties
- High water repellency
- Light weight & easy installation
- Excellent insulation performance in contaminated environment

RATING / T-M

Specifications	Unit	Characteristics
Leakage distance	mm	A-B : min 1,250 / C-D : min 230
Specified cantilever load (SCL)	N·m	min 3,430
Rated tensile load(RTL,1min)	N	58,800
Power frequency flashover voltage (dry)	kV	A-B : min 230 / C-D : min 70
Power frequency flashover voltage (wet)	kV	A-B : min 180 / C-D : min 50
Lightning impulse flashover voltage (1.2×50μs)	kV	A-B : min 380 / C-D : min 100
Radio Interference Voltage	r.m.s kV	25
	μV at 1000Khz	10

RATING / T-MS

Specifications	Unit	Characteristics
Leakage distance	mm	min 1,250
Specifie dcantilever load (SCL)	N·m	min 3,430
Rated tensile load (RTL, 1min)	N	58,800
Power frequency flashover voltage (dry)	kV	min 230
Power frequency flashover voltage (wet)	kV	min 180
Lightning impulse flashover voltage (1.2×50μs)	kV	min 380
Radio interference voltage	r.m.s kV	25
	μV at 1000Khz	10

Polymer Suspension Insulator (Polymer Type for Electric-railway Application T-s)

APPLICATION

- It is used for classifying 69kV transmission line and railway line, suspention feed line, and has excellent insulation and mechanical properties.

CHARACTERISTIC

- Excellent mechanical characteristics and insulation
- High water repellency by using silicon
- Easy installation by light weight
- Excellent insulation in contaminated environment

RATING

Specification		unit	Characteristics	
			No.1	No. 2 & 3
Section length		mm	750 ±5	760 ±5
Leakage distance		mm	min 1,725	
Dry arcing distance		mm	min 570	
Specified mechanical load (SML)		kN	137.2	
Rated tensile load (RTL)		kN	68.6	
Torsion load (1min)		N·m	50	
Power frequency withstand voltage (dry)		kV	230	
Power frequency withstand voltage (wet)		kV	185	
Lightningimpulse flashover voltage (1.2×50㎲)	Positive	kV	380	
	Negative		380	

DISTRIBUTION EQUIPMENT

Elbow Connector (25kV, 600A Deadbreak)

APPLICATION

- Using for connecting 25kV undergrounded line cables and switch.

CHARACTERISTIC

- Applicable by constructed cable type (Cu/Al)
- Electric field mitigation design
- Excellent shielding function
- Registered on KEPCO Qualified Supplier List

RATING

Specifications		Units	Characteristics
Rated voltage		kV	25.8
Maximum voltage	Phase-ground	kV	15.2
	Phase-phase		26.3
Lightning impulse withstand voltage (1.2 x 50㎲)		kV	125
Power frequency withstand voltage (1min)		kV	40
Direct current withstand voltage (15 min)		kV	78
Short time withstand current	0.17 seconds	A	25,000
	3 seconds		10,000
Partial discharge		pC	Max . 3

Elbow Connector (25kV, 200A Loadbreak)

APPLICATION

- Using for connecting 25kV undergrounded line cables and Pad transformal.

CHARACTERISTIC

- Applicable by constructed cable type(Cu/Al)
- Electric field mitigation design
- Excellent shielding function
- Registered on KEPCO Qualified Supplier List

RATING

Specifications		Units	Characteristics
Rated voltage		kV	25.8
Maximum voltage	Phase-ground	kV	15.2
	Phase-ghase	kV	26
Lightning impulse withstand voltage (1.2 x 50㎲)		kV	125
Power frequency withstand voltage (1min)		kV	40
Direct current withstand voltage (15 min)		kV	78
Short time withstand current	0.17 seconds	A	10,000
	3 seconds		3,500
Partial discharge		pC	Max. 3

23kV Class Cable Termination

APPLICATION

- Used for terminal connection processing of power cable end of 23kV underground distribution line

CHARACTERISTIC

- Electric field mitigation design
- Excellent shielding function
- Using special insulating rubber

RATING

Specification	Units	Characteristics
Rated voltage	kV	23
Lightning impulse withstand voltage (1.2x50μs)	kV	150
Power frequency withstand voltage (1min)	kV	52
Direct current withstand voltage(15min)	kV	100
Partial discharge	pC	Max. 3

23kV Class Cable Joint

APPLICATION

- Used for terminal connection processing of power cable end of 23kV underground distribution line.

CHARACTERISTIC

- Electric field mitigation design
- Excellent shielding function
- Using special insulating rubber

RATING

Specification	Units	Characteristics
Rated voltage	kV	23
Lightning impulse withstand voltage (1.2x50μs)	kV	150
Power frequency withstand voltage (1min)	kV	52
Direct current withstand voltage (15min)	kV	100
Partial discharge	pC	Max. 3

Polymer Cut out Switch (125BIL, 150BIL)

APPLICATION

- Use of heavy salts area due to excellent fouling resistance.

CHARACTERISTIC

- Excellent insulation and mechanical properties
- Excellent water repellency
- Ligiht weight and Easy installation
- 125BIL, 150 BIL 2-Types
- Registered on KEPCO Qualified Supplier List

RATING

Specifications		Units	Characteristic Value	
Rated voltage		kV	25.8	25.8
Maximum design voltage		kV	27	27
Rated current		A	100	100
Rated breaking current		kA	Sym 7.1 Asym 10	Sym 8 Asym 12
Power frequency withstand voltage	Dry	kV	42	70
	Wet	kV	36	60
Lightning impulse withstand voltage (1.2x50μs)		kV	125	150
Leackage distance		mm	400	645

Fuse Link

APPLICATION

- Fuse link used for wiring high voltage COS

CHARACTERISTIC

- Used to protect distribution transformer
- Expulsion fuse type allows rapid interrupting of arc

FUSING CURRENT A

Rated current (A)	300s or 600s melting current (A)		10sec melting current (A)		0.1sec melting current (A)	
	minimum	maximum	minimum	maximum	minimum	maximum
1	2	2.4	-	10	-	58
2	4	4.8	-	10	-	58
3	6	7.2	-	10	-	58
5	10	12	-	16.5	-	74.5
6	12	14.4	13.5	20.5	72	86
8	15	18	18	27	97	116
10	19.5	23.4	22.5	34	128	154
12	25	30	29.5	44	166	199
15	31	37.2	37	55	215	258
20	39	47	48	71	273	328
25	50	60	60	90	350	420
30	63	76	77.5	115	447	546
40	80	96	98	146	565	680
50	101	121	126	188	719	862
65	128	153	159	237	918	1,100
80	160	192	205	307	1,180	1,420
100	200	240	258	388	1,520	1,820
140	310	372	430	650	2470	2,970
200	480	576	760	1150	3880	4,650

※Reference value for K-type fuse-link operation characteristics
※Fuselink with rated current of 100A or less is 300 seconds. Fuse link in excess of 100A is 600 seconds.

Current Limiting(CL) Fuse

APPLICATION

- The high voltage current limiting fuses(C. L Fuse)are intended for protection of high voltage
- Consumers(lines, transformers, motors, capacitors, switching devices etc.) against thermal and dynamic effects which are caused by the current which exceeds the permitted value as regards amplitude and duration.

CHARACTERISTIC

- High breaking capacity and reliable interruption of critical current
- Reliable interruption at rated current
- Favorable characteristic of cut-off current
- Low power dissipation
- Switching voltages during interruption are essentially lower than prescribed
- Reliable operation of the striker system

RATING

Specification	Unit	Characteristics
Rated voltage	kV	7.2/24
Type		JK-FL-00-00
Rated current	A	6~125
Power frequency withstand voltage	kV	22/25, 50/60
Impulse withstand voltage	kV	60/70, 125/145
Weight (automatic / manual)	kg	2.3~5.8
Applied standard		IEC 60282-1

Polymer Surge Arrester

APPLICATION

- Protect the rear end facilities in case of lightning and abnormal voltage intrusion into the processing power line. also limits overvoltage by switching circuits and is used to block the flow.

CHARACTERISTIC

- Perfect moisture proof by injection molding
- Optimal structure and excellent durability
- High safety due to the application of Zinc Oxide Blocks
- Registered on KEPCO Qualified Supplier List

RATING

Specification		Unit	Characteristics
Rated voltage		kV	18
Max. continuous operating voltage (MCOV)		kV	15.3
Nominal discharge current		A	2,500 / 5,000
Reference voltage		kV	min 22.9
Residual voltage	Steep voltage	kV	66
	Lightning impulse voltage		60
Partial discharge		pC	Max. 10
Leakage distance		mm	min 645

Polymer Surge Arrester with Lead wire

APPLICATION

- Protect the rear end facilities in case of lightning and abnormal voltage intrusion into the processing power line. Also limits overvoltage by switching circuits and is used to block the flow. This product has a lead wire connected to a polymer lightning arrestor.

CHARACTERISTIC

- Perfect prevention of humidity by injection molding
- Optimal structure and excellent durability
- Miniaturization and weight lightening
- High safety due to the application of Zinc Oxide Blocks
- Registered on KEPCO Qualified Supplier List

RATING

Specification		Unit	Characteristics
Rated voltage		kV	18
Max. continuous operating voltage MCOV		kV	15.3
Nominal discharge current		A	2,500 / 5,000
Reference voltage		kV	min 22.9
Residual voltage	Steep voltage	kV	66
	Lightning impulse voltage		60
Partial discharge		pC	Max. 10
Leakage distance		mm	min 645

Polymer Arrester (Gap Type)

APPLICATION

- Gap type is Prevents damage of LP insulator protection from lightning and surge

CHARACTERISTIC

- Perfect prevention of humidity by injection molding
- Optimal structure and excellent durability
- Miniaturization and weight lightening

RATING

Specifications		Units	Characteristics
Rated voltage		kV	18
Nominal discharge current		kA	2.5
Residual voltage		kV	max.55
Power frequency withstand voltage	Dry	kV	42 (1 min)
	Wet	kV	36 (10 seconds)
Lightning impulse flashover voltage	Pos	kV	95-150
	Neg		105-160
Partial discharge		pC	Max. 10

Boltless Spacer Damper

APPLICATION

- The boltless spacer damper is a device for maintaining of distance across the wire and absorbing of vibration on the transmission lines.

CHARACTERISTIC

- Semi-rigid spacer with automatic clamping device
- Electrometric rings allow clamp movements
- Light and reliable
- Quick and easy installation

RATING

Type	JESD-2	JESD-4	JESD-6
Quality of the material		aluminium alloy	
Applied wire	ACSR 330mm²	ACSR 480mm² RAIL	ACSR 480mm² CARDINAL
	ACSR 410mm²	ACSR 480mm² CARDINAL	
Number of conductors	2	4	6
Diameter of conductor array clamp (mm)	25.3±0.7	29.6±0.7	30.4±0.7
	28.5±0.7	30.4±0.7	
Interval of conductor array clamp (mm)		400±3	

Insulation Piercing Connector

APPLICATION

- The IPC is used for all connections of insulated aluminium and coopper main and branch conductors up to 6kV. The design enables hot line installation.

CHARACTERISTIC

- The insulation piercing connectors (I.P.C) for indoor/outdoor are designed to comply with most worldwide standards.
- Connection quality: "Hot spots" are eliminated with a shear head screw that ensures the correct tightening torque.
- Easy installation: To install the whole series as only two hex wrenches (1/2" and 5/8").
- Safe : I.P.C can be installed on an energized conductor. However, the tap must not be under load.

RATING

Standard number	Applied wire(mm²)	
	Main wire	Branch line
IPC-1	22-60	2.0-3.2
IPC-2	22-60	14-38
IPC-3	38-100	14-60
IPC-4	60-100	100-150
IPC-5	100-150	14-100

Boxes for Ground Terminals Stainless/Synthetic Resin Type 4P,5P,6P

APPLICATION

- Terminal box for grounding

CHARACTERISTIC

- Stainless and Plastic 2-Type
- solid fastening with use of clamps
- Safe grounding with copper booth bar
- Al : Slip type of terminal cover
- Pe : light weight and excellent corrosion resistance , one-touch clip application of cover
- Excellent corrosion resistance of stainless steel

RATING

Size	Stainless	30cm(width) × cm(height) × 8cm(breadth)	1P~6P
	PE	35cm(width) × cm(height) × 9cm(breadth)	1P~6P

Staninless Boxes for Meters and Devices

APPLICATION

- Stainless case, designed for toughness and high corosion resistance.

CHARACTERISTIC

- Solid enclosure
- Excellent corrosion resistance of stainless steel

RATING

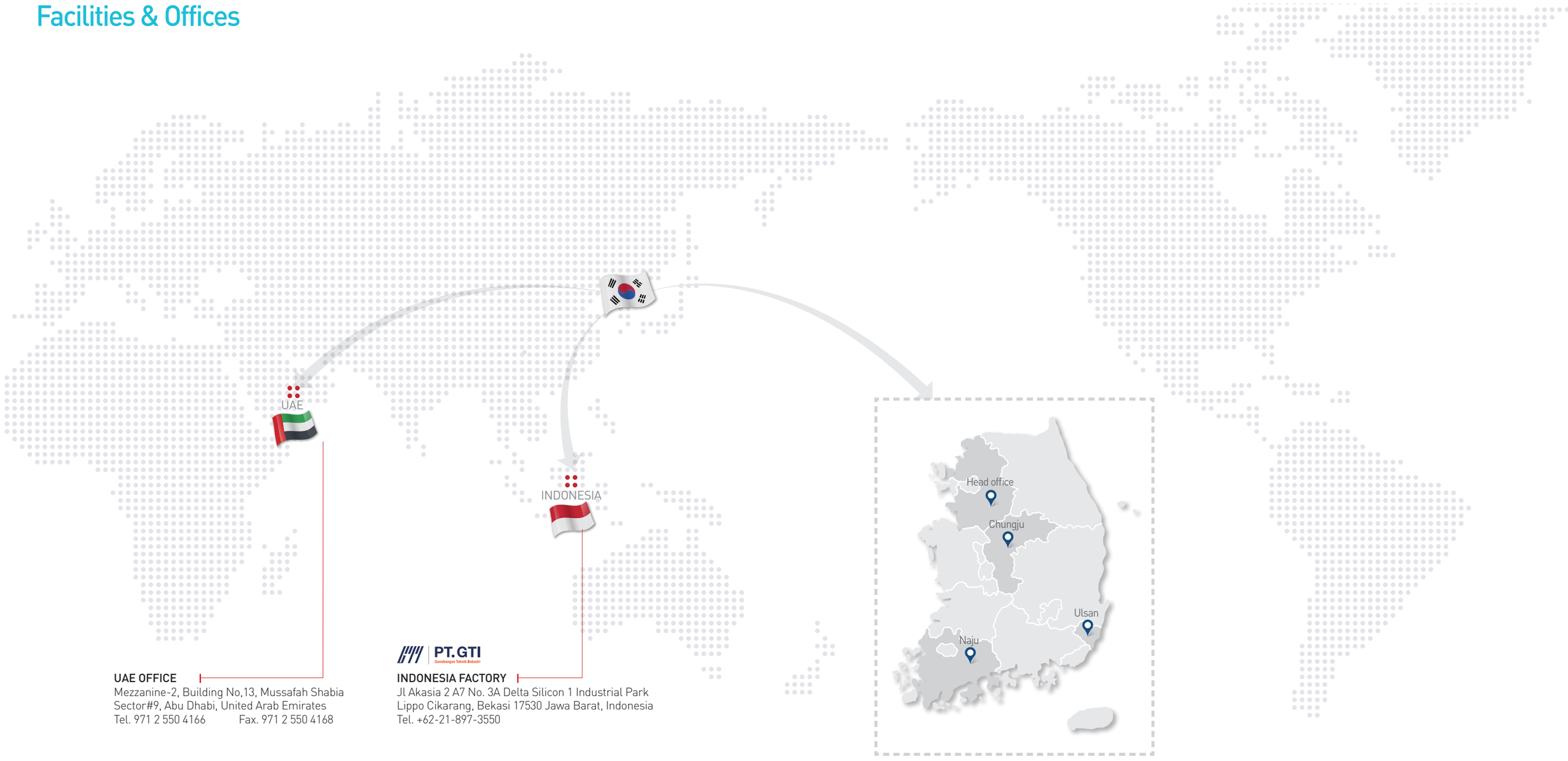
Quality of the material
45cm(width) × 55cm(height) × 19cm(breadth)
Available from 1st to 4th generation

PRODUCTS FOR CROSS-ARM

Roduct	Type	Characteristics
Bands for crossarm	One Side 2 types / Two Side 2 types	Used to install a cross arm in electric pole
U-bolts	Crossarm 2 types / Anchor block 4 types	Used to install a cross arm in electric pole
Racks for low voltage distribution	One Line / Two LinesThree Lines / Four Lines	A product for supporting electric wires used in vertical wiring in low pressure machined electric power lines.
Hanger band	small size S1 / S2 / S3	Used to install and fix transformers on poles in processing power line
Rod for guy-wire	-	Used to connect the ground line of pole with the branch line that is installed underground.
Grip for ground wire	12 / 22 / 30 / 38 / 45 / 55 / 70 / 90	Used for connection of the ground wire to a processing power line, it effectively secures the ground wire..
Eye shackles	-	Attach to the pole and connect with the suspension
Hexagon head bolts and nuts	130 / 400 / 460 / 490 (mm)	Used for each type of pole fittings in a processing power line
Line post insulator pin	No.3	Used to combine linepost insulator in finished iron that used in processing power lines
D-type racks	Straight Pole / Strain Pole	Compatible with linear and internal applications
Step bolts	M16 x 160	It is installed on a pole and used for footrest support so that workers can safely move on and off during work
Wedge type dead-end clamp	WDC 2 types / WDA 3 types	Used to hold wires in combination with a suspension insulator on a special high pressure wiring track
COS Braket	-	Product for fixing a special high pressure of COS on the pole
Low voltage shackle type linsulator	-	Used as a low-pressure processing power line or in an service wire
Ground clamp for crossarms	-	Used to secure the ground wire by installing it in the finished iron of the distribution pole.
Indicator for underground wire location	UM-1 / UM-2 / UM-3 / UM-4 / UM-5	Install the pavement of asphalt, concrete, and sidewalk blocks on the surface to determine the connection points of the underground distribution line or cable.
Cable connecting strap	t2 x 30 x 240	When using AL wire as special high pressure neutral in machined wiring furnace, it is applied to insulator of low pressure

CERTIFICATION

Facilities & Offices



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