

ELEKTRO EXPORT

YOUR TRUSTED PARTNER
ELECTRICAL & MECHANICAL SOLUTIONS

We offer service
at international standards
with our competitive prices and
durable and useful products.

info@elektroexport.com

+90 554 373 88 31

www.elektroexport.com

SIRAKAPILAR MAH. 495 SK. NO: 23 İÇ KAPI NO: 5
MERKEZEFENDİ/ DENİZLİ

ELEKTRO EXPORT

OUR BENEFITS

International Quality

Our professionalism and vast experience has enabled us to create a niche for ourselves and make our presence felt worldwide.



Reasonable Price

We guarantee you economic costs and high quality on all our electrical control system solutions.

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HOW WE CAN ASSIST YOU

Individual Approach

Each client and situation is treated in a unique and distinct way.



Complex Solution

Complex problem-solving often involves assessing and evaluating potential solutions for problems that have several variables and intricacies.

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Diesel & Gas Electrical Generators

- Diesel Generator
- GAS Generator
- CHP Units Synchronization Panel
- Generator Synchronization Panel
- Power Monitoring and Load Sharing System
- Portable Generator
- Renting units



Medium Voltage Equipments

- Metal Enclosed Modular Switchgear
- Metal Clad Switchgear
- SF6 Gas Insulated Switchgear
- Auto-Recloser
- Oil Type Distribution Transformers
- Dry Type Transformers

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Electrical Power & Control Panels

- Main Breaker Panels
- Main Distribution Panels (MDB)
- Sub Distribution Panels (SDB)
- Transfer Switches (ATS, MTS)
- Synchronization panels

Robust Automation PLC System

- PLC Panels
- Remote I/O Panels
- DCS Panels
- Safety Integrated Level (SIL) PLC Panels

SCADA & HMI System

- Field controllers (RTUs/PLCs)
- Human-machine interface (HMI)
- Network connectivity

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Instrument Measurement & Analytical

- Flow meters
- Flow transmitters
- Level transmitters
- Temperature transmitters
- Pressure transmitters
- Analytics measurement



Harmonic Filters

- Active Harmonic Filter
- Passive Harmonic Filter
- Harmonic Filter Reactors

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OUR SOLUTION PARTNERS

EATON

Aysan Elektrik

Schneider Electric

ASTOR

ABB

europower enerji

Beta ENERJİ

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MEDIUM VOLTAGE SWITCHGEARS & COMPONENTS

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METAL ENCLOSED

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AIR INSULATED METAL ENCLOSED MODULAR SWITCHGEAR

7,2-36kV / 630-1250A / 16kA-20kA-25kA



COMPARTMENTS OF THE AIR INSULATED METAL ENCLOSED MODULAR SWITCHGEAR

The types of Air Insulated Modular Switchgear comprise of 3 main compartments. These compartments are secured by switching and mechanical interlocks.

A – Low Voltage Compartment
This compartment contains all secondary circuits for control (measurement, protection, monitoring, communication and other associated systems).

B - Circuit Breaker and Cabling Compartment
The equipment set forth hereunder is installed
in the circuit breaker compartment:

- SF6 Gas / Vacuum Circuit Breaker
- SF6 Gas Switch Disconnector
- Voltage Transformer
- Current Transformer
- Medium Voltage Fuse
- Capacitive Voltage Divider
- Cable glands and connectors

C – Busbar Compartment
The busbar compartment contains the electrolytic copper, the isolators and gate isolators chosen according to the rated current. Access to this compartment requires special instructions and safety precautions.



Applicable Standards

IEC 62271
High-Voltage Switchgear and Controlgear - Common Features

IEC 62271-200
High-Voltage Switchgear and Controlgear (AC up to and including 52 kV)

IEC 62271-100
Alternating Current Circuit Breakers

IEC 62271-102
Alternating current disconnectors and earthing switches

IEC 62271-105
Alternating current switch-fuse combinations

IEC 61869-2
Current Transformers

IEC 61869-3
Voltage Transformers

IEC 60273
Post Insulators

IEC 60051
Electrical Measuring Instruments

IEC 60255
Secondary Protection Relays

IEC 61243-1
Live Working - Voltage Detectors

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TECHNICAL SPECIFICATIONS

ARMTEK Component -Arme Series Metal Enclosed Moduler Switchgear

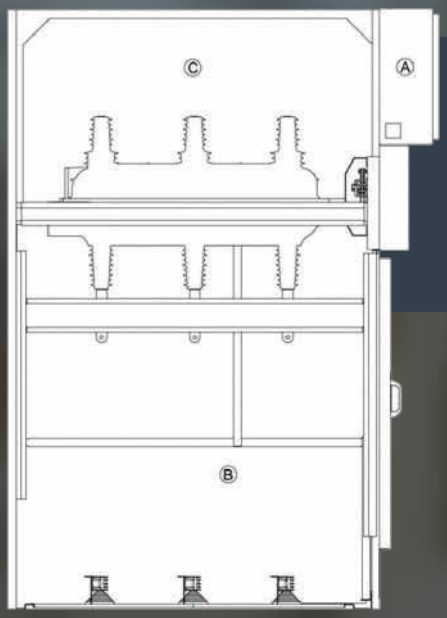
Rated Voltage	12kV	17.5kV	24kV	36kV
Rated Current	630-1250 A	630-1250 A	630-1250 A	630-1250 A
Rated Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated Short Circuit withstand Current (1-3sn)	16-21kA	16-21kA	16-21kA	16-21kA
Rated Frequency withstand Voltage	28kV	38kV	50kV	70kV
Rated Lightning Impulse withstand Voltage 1.2/50us	75kV	95kV	125kV	175kV
Internal Arc Class	IAC-AFL	IAC-AFL	IAC-AFL	IAC-AFL
Protection Class	IP3X	IP3X	IP3X	IP3X

SWITCHGEAR TYPE 36kV	Height (mm)	Width(mm)	Depth (mm)
ARME-YGC- Incoming/Outgoing Switchgear with SF6 Gas Load Break Switch	2250	750	1400
ARME-YST - Transformer Protection Switchgear with SF6 Gas Load Break Switch+Fuse Kit	2250	750	1400
ARME-YAG-Current and Voltage Metering Switchgear with SF6 Gas Load Break Switch	2250	1000	1400
ARME-KGC- Incoming/Outgoing Switchgear with SF6 Gas Circuit Breaker	2250	1000	1400
ARME-KTK- Transformer Protection Switchgear with SF6 Gas Circuit Breaker	2250	1000	1400
ARME-KBB- Bus Coupling Switchgear with SF6 Gas Circuit Breaker Disconnector Switch	2250	1500	1400
ARME-GAG- Current and Voltage Measurement Switchgear with Disconnector	2250	1000	1400
ARME-GGO- Voltage Metering Switchgear with Disconnector	2250	750	1400
ARME-OTOP-Incoming/Outgoing Switchgear with Circuit Breaker-Voltage Transformer	2250	1500	1400

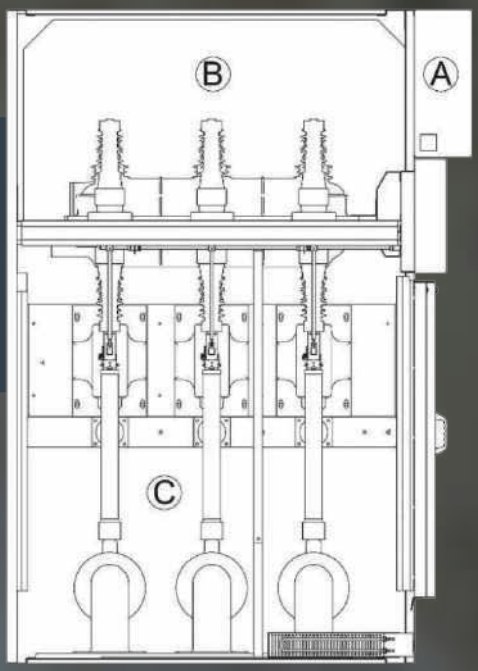
SWITCHGEAR TYPE 12-24kV	Height (mm)	Width(mm)	Depth (mm)
ARME-YGC- Incoming/Outgoing Switchgear with SF6 Gas Load Break Switch	1800-1900	375-500	1000-1200
ARME-YST - Transformer Protection Switchgear with SF6 Gas Load Break Switch+Fuse Kit	1800-1900	375-500	1000-1200
ARME-YAG-Current and Voltage Metering Switchgear with SF6 Gas Load Break Switch	1800-1900	750	1000-1200
ARME-KGC- Incoming/Outgoing Switchgear with SF6 Gas Circuit Breaker	1800-1900	750	1000-1200
ARME-KTK- Transformer Protection Switchgear with SF6 Gas Circuit Breaker	1800-1900	750	1000-1200
ARME-KBB- Bus Coupling Switchgear with SF6 Gas Circuit Breaker Disconnector Switch	1800-1900	750-1000	1000-1200
ARME-GAG- Current and Voltage Measurement Switchgear with Disconnector	1800-1900	750	1000-1200
ARME-GGO- Voltage Metering Switchgear with Disconnector	1800-1900	375-500	1000-1200
ARME-OTOP-Incoming/Outgoing Switchgear with Circuit Breaker-Voltage Transformer	1800-1900	1000	1000-1200

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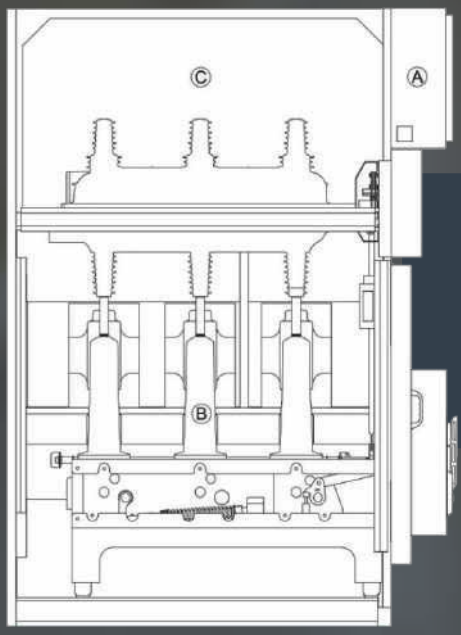
ARME Series Range of Products



Incoming/Outgoing Switchgear with SF6 Gas Load Break Switch



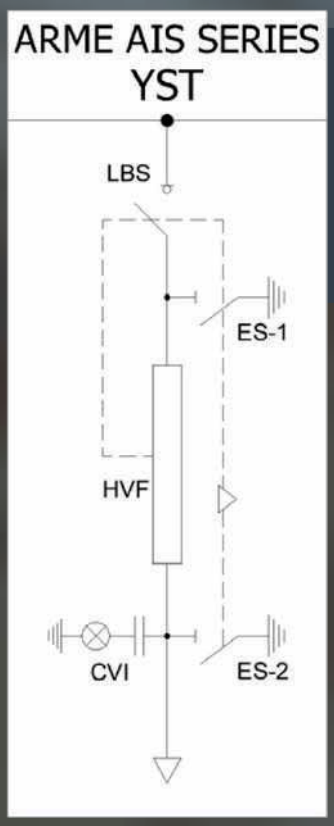
Current and Voltage Metering Switchgear with SF 6 Gas Load Break Switch



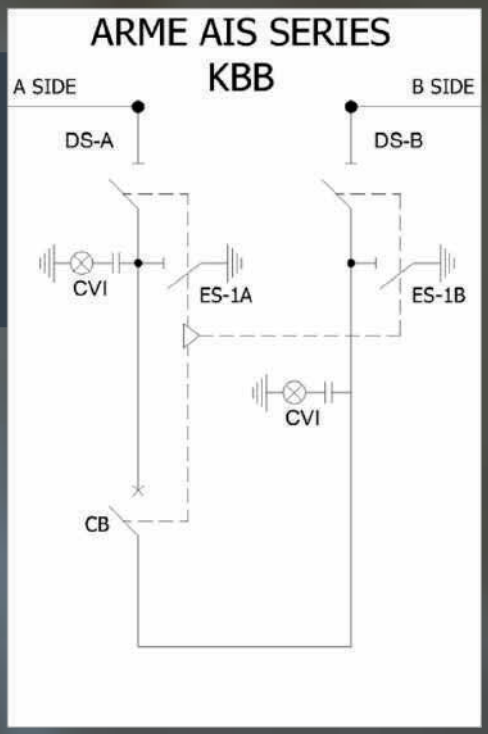
Incoming / Outgoing Switchgear with SF6 Gas Circuit Breaker

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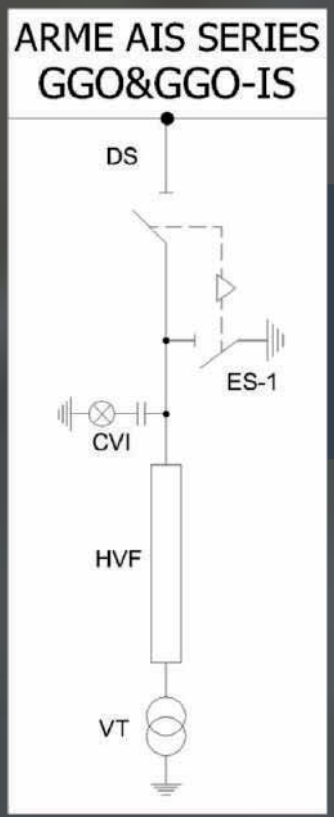
ARME Series Range of Products



Transformer Protection Switchgear with SF6 Gas Load Break Switch+Fuse Kit



Bus Coupling Switchgear with SF 6 Gas Circuit Breaker Disconnector Switch



Voltage Metering Switchgear

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METAL CLAD

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AIR INSULATED METAL CLAD MODULAR SWITCHGEAR

7,2-40,5kV / 630-3150A / 25kA-31,5kA



COMPARTMENTS OF THE AIR INSULATED METAL CLAD MODULAR SWITCHGEARS

A - Low Voltage Compartment
This contains all secondary circuits for control
(measurement, protection, monitoring, communication
and other associated systems).

B - Circuit Breaker Compartment
The equipment set forth hereunder is installed in the
circuit breaker compartment:
- Vacuum Circuit Breaker
- SF6 Circuit Breaker
- Vacuum Contactor
- Voltage Transformer with Fuse
- Mechanisms and Locks
- Mobile Partition

C – Busbar Compartment
The busbar compartment contains the electrolytic copper,
the isolators and gate isolated from each other.

D – Voltage Transformer Compartment
This compartment contains combination of fuse + voltage
transformer.
Safety is ensured by the mechanical locks and partition
mechanism.

E – Cable Compartment
The equipment set forth hereunder is installed in this

Applicable Standards

IEC 62271
High-Voltage Switchgear and Controlgear - Common Features

IEC 62271-200
High-Voltage Switchgear and Controlgear (AC up to and including 52 kV)

IEC 62271-100
Alternating Current Circuit Breakers

IEC 62271-102
Alternating current disconnectors and earthing switches

IEC 62271-105
Alternating current switch-fuse combinations

IEC 61869-2
Current Transformers

IEC 61869-3
Voltage Transformers

IEC 60273
Post Insulators

IEC 60051
Electrical Measuring Instruments

IEC 60255
Secondary Protection Relays

IEC 61243-1
Live Working - Voltage Detectors

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RMU

RMU

Ring Main Unit and Package Substation

Overview

RM6 is an indoor, compact gas insulated switchgear (GIS) intended for the MV section of compact MV/LV substation and customer distribution substation, with a service voltage up to 24kV / 630A.

RM6 range includes a number of compact and modular functional units for secondary distribution needs. RM6 Free Combination is a new range extension and allows a higher configuration flexibility of switchboards to meet all needs:

Functional units

- I - switch disconnector
- Q - fuse-switch combination
- D - 200A circuit breaker
- B - 630A circuit breaker
- Mt - MV metering
- IC - network coupling with switch disconnector
- BC - network coupling with circuit breaker
- O - direct busbar connection



36 kV MMC

Description

Description of a functional units

A functional unit comprises all the devices in the main and auxiliary circuit which together provide a protection function.

Each functional unit contains all the components which are required to perform this function;

- The Cubicle
- The protection, monitoring and control system
- The withdrawable part

Rated Values

Description		Values
Rated Voltage		6-36kV
Rated Insulation Level		
Power Frequency Withstand Voltage	Phase Ground Earth and between Phases	70kV (effective)
(50 Hz, 1 min.)	Separation Distance	80 kV (effective)
Lightning Impact Withstand Voltage	Phase Ground Earth and between Phases	170 kV (peak)
(1.2/50 Micro Seconds)	Separation Distance	180 kV (peak)

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DRY AIR GAS INSULATED SWITCHGEAR

Dry Air Gas Insulated Switchgear
AGIS Series

AGIS Series Primary Gas Insulated Switchgears replace SF6 which is the world's strongest greenhouse gas, using climate-friendly dry air insulation. SF6 has been widely used for over 40 years in electrical equipment due to its electrical insulating and arc-quenching properties.

However, SF6 is strong potential greenhouse gas with a high Global Warming Potential (GWP) and has raised concerns about its

Dry Air Gas Insulated Switchgear maintains all the benefits of F-gas based GIS and provides additional safety and asset health features unmatched by the competition. Also free from following costs needed for SF6 GIS;

- Specialized SF6 gas equipment
- SF6 reporting obligations
- SF6 certification of Personnel
- SF6 inventory keeping
- Training of Personnel
- End-of-life disposal costs



The interior switching devices for all poles are enclosed by a metal vessel according to IEC 62271-200. The dry air gas is;

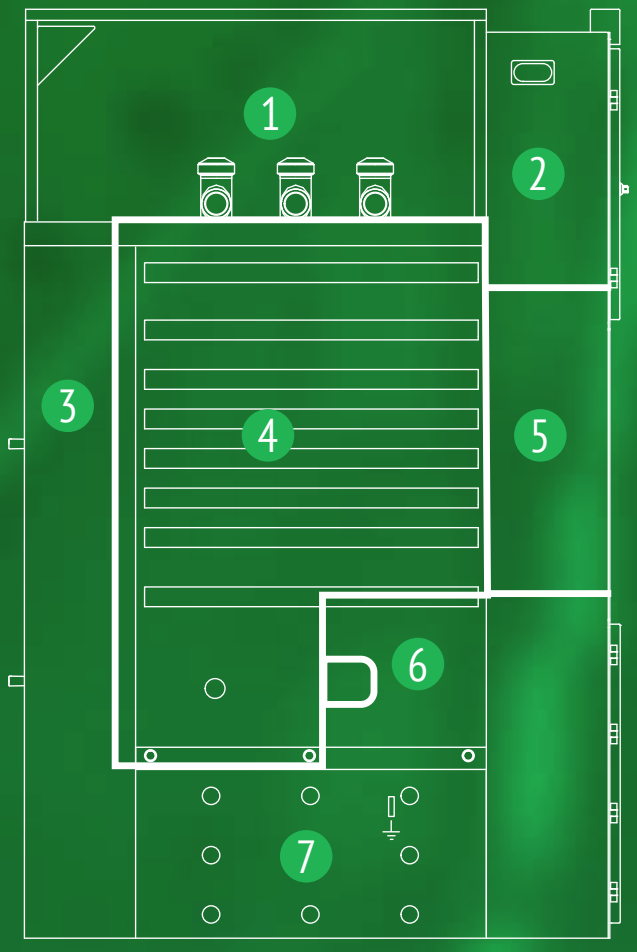
- Non-toxic
- No F-gases involved
- Climate-neutral
- Non-inflammable
- Chemically neutral

Dry Air Gas Insulated Switchgear
AGIS Series

Technical Specifications

Description	Unit	Values
Rated voltage	kV	24 / 36
Power frequency withstand voltage	kV	50 / 70
Lightning impulse withstand voltage	kV	125 / 170
Rated frequency	Hz	50 / 60
Rated busbar current	A	Up to 2500
Rated feeder current	A	1250 / 2500*
Rated short time current	kA	up to 31.5 (3 s)
Rated peak withstand current	kA	78.8
Internal arc protection (AFLR)	kA	31.5 (1 s)

Typical Feeder Unit



1. Busbar Compartment
2. LV Compartment
3. Pressure relief duct
4. Switching Compartment
5. Drive Mechanism
6. Cable bushing
7. Cable Compartment

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Dry Air Gas Insulated Switchgear AGIS Series

Advantages

- Dry air insulation medium reduces the gas handling process and avoids F-gas leakage
- Climate-friendly natural gases
- Independent of ambient conditions and external parameters
- User-friendly thanks to modularity
- Reduction of operating cost thanks to maintenance free structure
- Its sealed pressure system is designed for min. 30 years of lifetime
- Accessibility of cable compartment, current and voltage transformers from front of the switchgear
- No relubrication or readjustment required during the lifetime
- Cost efficient and operation of devices based on logic functions leading to flexible and integrated solutions
- Fully type tested manufacturing
- Panel can be replaced without moving other panels and additional gas work
- 5 years warranty option

Features

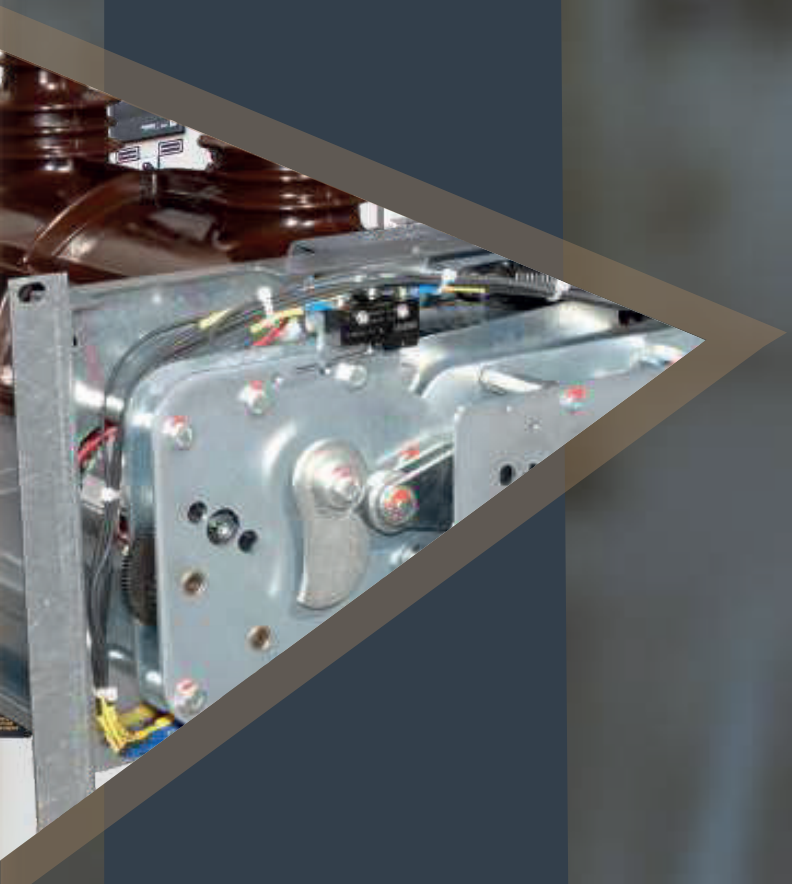
- The design with Innovation, sustainability and technology
- Can be equipped with intelligent sensors updating the health of the switchgear in real time
- Widely available as standard technical gas
- Sealed pressure system can protect against environmental effects (pollution, humidity and rodents)



Safety

- AFLR internal arc classification
- LSC-2 Service Continuity Class
- PM Partition Class
- Protection class is IP 3X (doors are closed)
  IP 2X (between comp.)
- Logical mechanical interlocks according to IEC 62271-200 prevent maloperation
- Operational safety with special hinged door design
- No SF6 gas handling
- The shielded busbar ensures safe to-touch
- Mechanism operation at the ergonomic position in front of the switchgear

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SWITCHGEAR COMPONENTS

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INSTRUMENT TRANSFORMERS

Toroidal / Cable Type Current Transformers

	ARCT-KA07	
Rated Primary Current Ipr	A	40.....8000A
Rated Secondary Current Is	A	1A,5A
Rated Frequency	Hz	50 /60
Class Rated Burden	VA	Acc. to customer requirement
Accuracy Class		Acc. to customer requirement
Insulation Level		0,72 / 3 / -kV
Rated Short Time Thermal Current	Ith	min. 100*Ips
Insulation Class		E
Standard		IEC,VDE,ANSI,AS,CAN,GOST, etc.



Block Type Current Transformers

TYPE		ARCT-B12	ARCT- B123
Rated Data			
Max. Operating Voltage	kV	Up to 17,5kV	
Max. Test Voltages	kV	38/95	
Rated Frequency	Hz	50 /60	
Max. Rated Primary Current	A	2500	
Secondary Rated Current	A	1 or 5	
Rated Short Time Thermal Current Ith (1s)	kA	Max. 600 (1000 x In)	
Rated Dynamic Current Idyn	kA	Max 120 (2,5 x Ith)	
Weight (approx.)	Kg	20-22	30-35



TYPE		ARCT-B24	ARCT- B243
Rated Data			
Max. Operating Voltage	kV	Up to 24kV	
Max. Test Voltages	kV	50/125	
Rated Frequency	Hz	50 /60	
Max. Rated Primary Current	A	4000 (Icont 1 x In)	
Secondary Rated Current	A	1 or 5	
Rated Short Time Thermal Current Ith (1s)	kA	Max. 600 (1000 x In)	
Rated Dynamic Current Idyn	kA	Max 120 (2,5 x Ith)	
Weight (approx.)	Kg	33-35	45-50



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INSTRUMENT TRANSFORMERS

TYPE		ARCT-B36	ARCT- B36H
Rated Data			
Max. Operating Voltage	kV	Up to 36kV	
Max. Test Voltages	kV	70 / 170	
Rated Frequency	Hz	50 /60	
Max. Rated Primary Current	A	4000 (Icont 1 x In)	
Secondary Rated Current	A	1 or 5	
Rated Short Time Thermal Current Ith (1s)	kA	Max. 600 (1000 x In)	
Rated Dynamic Current Idyn	kA	Max 120 (2,5 x Ith)	
Weight (approx.)	kg	40-55	45-60



TYPE		ARCT-M36
Rated Data		
Max. Operating Voltage	kV	Up to 36kV
Max. Test Voltages	kV	70 / 170
Rated Frequency	Hz	50 /60
Max. Rated Primary Current	A	1500
Secondary Rated Current	A	1 or 5
Rated Short Time Thermal Current Ith (1s)	kA	Max. 600 (1000 x In)
Rated Dynamic Current Idyn	kA	Max 120 (2,5 x Ith)
Weight (approx.)	kg	28-36



Block Type Voltage Transformers

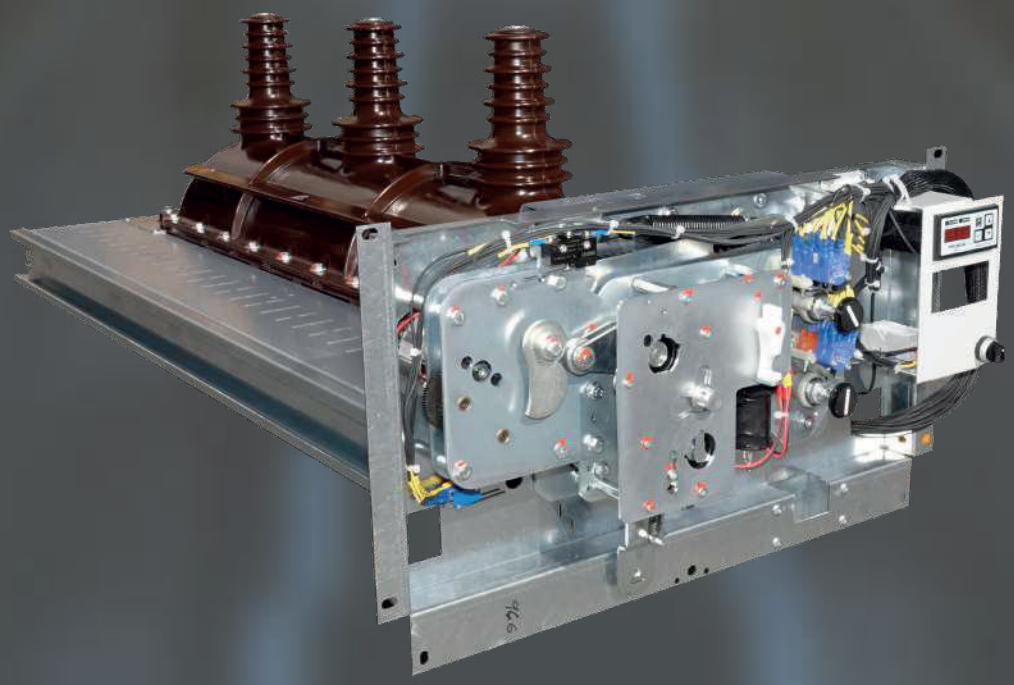
TYPE		ARVT-M12
Rated Data		
Highest Voltage For Equipment,Um(r.m.s)	kV	Up to 17,5kV
Max. Test Voltages	kV	38/98
Rated Frequency	Hz	50 /60
Rated Primary Voltages, Un(max)	kV	15 √3
Secondary Voltage	V	100 √3 or 110√3 or 120 √3
Rated Burden in Class 0.2-0.5-1.0	VA	5-10-15-20-30-40
Max. Rated Burden For Protection Purpose in Class	V A	100
Thermal Limiting Current For Earth Fault Detection Winding	A	6
Rated Voltage Factor (8h)		1,9 Un
Weight (approx.)	kg	25



MEDIUM VOLTAGE SWITCHGEAR COMPONENT

SF6 Gas Insulated Disconnectors

ARMTEK SF6 GAS INSULATED DISCONNECTORS	12-24kV	
Rated Voltage	12/24 kV	36kV
Rated Lightning Impulse withstand Voltage	125 kV	
Between Isolating Distance (Open Position Between The Contacts)	145 kV	195 kV
Rated Frequency withstand Voltage (1min)	50 kV	
Rated Current	630-1250 A	630-1250 A
Rated Frequency	50-60 Hz	
Rated Short Circuit withstand Current (1sec)	16-20kA	16-20kA
Protection Class	IP68	



MEDIUM VOLTAGE SWITCHGEAR COMPONENT

SF6 Gas Circuit Breakers

ARMTEK LATERAL TYPE SF6 CIRCUIT BREAKERS	12-24 kV	36 kV
Rated Voltage	12/24 kV	36kV
Rated Lightning Impulse withstand Voltage	125 kV	170 kV
Rated Frequency withstand Voltage	50 kV	70 kV
Rated Current	630-1250 A	630-1250 A
Rated Frequency	50-60 Hz	50-60 Hz
Rated Short Circuit withstand Current (1sec)	16-20kA	16-20kA
Insulation	SF6	SF6
Rated Peak Short Circuit Current	40-50 kA	40-50 kA
Mechanical Endurance Class	M2	M2
Electrical Endurance Class	E2	E2
SF6 Gas Level	1.5-2.2 bar	1.5-2.2 bar





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MEDIUM VOLTAGE SWITCHGEAR COMPONENT

Vacuum Circuit Breakers

ARMTEK VACUUM CIRCUIT BREAKERS	12 kV	24kV	36 kV
Rated Voltage	12kV	24kV	36kV
Rated Frequency withstand Voltage	28kV	50kV	70kV
Rated Lightning Impulse withstand Voltage	75kV	125kV	170kV
Rated Current	1250-2500A	1250-2500A	1250-2500A
Rated Frequency	50-60Hz	50-60Hz	50-60Hz
Rated Short Circuit withstand Current (kA/3sn)	31,5kA	31,5kA	25kA
Cutting Environment	Vacuum	Vacuum	Vacuum
Rated Peak Short Circuit Current	78,8	78,8	78,8
Mechanical Endurance Class	M2	M2	M2
Electrical Endurance Class	E2	E2	E2
Capacitive Class	C2	C2	C2





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SUBSTATIONS

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COMPACT TRANSFORMER SUBSTATIONS

ARCK SERIES / ARSK SERIES/ ARPK SERIES



ARCK Series Concrete Kiosks

ARCK Series MV-LV Monoblock Concrete Transformer Substations and Distribution Substations are products designed for MV-LV electrical installations and manufactured according to applicable international standards and specifications.

Fields of Use

The products are used as

- MV/LV Substations
- MV Distribution center
- LV panel cabinet in electricity generation (WPP/HEPP), transmission and distribution plants.
- Generator Cabinet



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ARSK SERIES SHEET KIOSKS

ARSK Series Metal sheet kiosks are substations that Technical Specifications manufactured from galvanized and electrostatic powderpainted sheet metal at any desired dimension for all field application. Sheet kiosks are available for use under several all climatic conditions. ARSK Series sheet kioks the medium voltage – low voltage (MV/LV) distribution center needs for electricity distribution companies and private projects.

TECHNICAL SPECIFICATIONS

Rated Voltage	11-36 kV
Maximum Rated Nominal Power (kVA)	2500 kVA
Dimensions (meters)	2-40 m
Metal Sheet Thickness	2-3 mm
Protection Class	IP55
Paint	Electrostatic



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ARPK Series Prefabricated Kiosks

ARPK Series MV-LV Prefabricated Concrete Transformer Substations and Distribution Centers are products designed for MV-LV electrical installations and manufactured according to applicable international standards and specifications.



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TRANSFORMERS

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DISTRIBUTION TRANSFORMERS

Oil-Immersed Distribution Transformer

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Hermetic Oil Immersed Type Distribution Transformers

This is a type of transformer in which the contact of the oil used for cooling and insulation with the air in the atmosphere is prevented by using hermetic sealing method.



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Hermetic Oil Immersed Type Distribution Transformers Technical Details

Power (kVA)	Voltage (kV)	No Load Losse (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
25	15.8kV	70	600	4	37	740	950	1,290	364
50		90	750	4	39	895	965	1,310	582
100		145	1,250	4	41	770	970	1,380	827
160		210	1,750	4	44	840	1,000	1,340	891
250		300	2,350	4	47	815	1,250	1,480	1,184
400		430	3,250	4	50	935	1,255	1,500	1,464
630		600	4,600	4	52	995	1,335	1,635	2,018
800		650	6,000	6	53	1,000	1,630	1,795	2,509
1,000		770	7,600	6	55	1,115	1,530	1,730	2,782
1,250		950	9,500	6	56	1.040	1,855	1,705	3,018
1,600		1,200	12,000	6	58	1,140	2,058	1,860	3,327
2,000		1,450	15,000	6	60	1,270	2,000	2,035	4,136
2,500		1,750	18,500	6	63	1,215	2,105	2,135	4,645

Power (kVA)	Voltage (kV)	No Load Losse (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
25	33 kV	81	660	5	39	695	945	1,200	400
50		105	825	5	41	750	1,045	1,380	640
100		170	1,375	5	43	765	1,150	1,450	910
160		242	1,925	5	46	865	1,130	1,420	980
250		345	2,585	5	49	890	1,195	1,515	1,302
400		495	3,575	5	52	885	1,270	1,600	1,610
630		690	5,060	5	54	970	1,345	1,785	2,220
800		750	6,600	6	55	1,055	1,475	1,835	2,760
1,000		885	8,360	6	57	1,000	1,745	1,895	3,060
1,250		1,095	10.450	6	58	1.010	1,795	1,860	3,320
1,600		1,380	13.200	6	60	1,030	1,820	1,905	3,660
2,000		1,670	16,500	6	62	1,270	1,960	2,095	4,550
2,500		2.015	20,350	6	65	1,270	2,085	2,170	5,110

ELEKTRO EXPORT

Hermetic Oil Immersed Type Distribution Transformers Technical Details

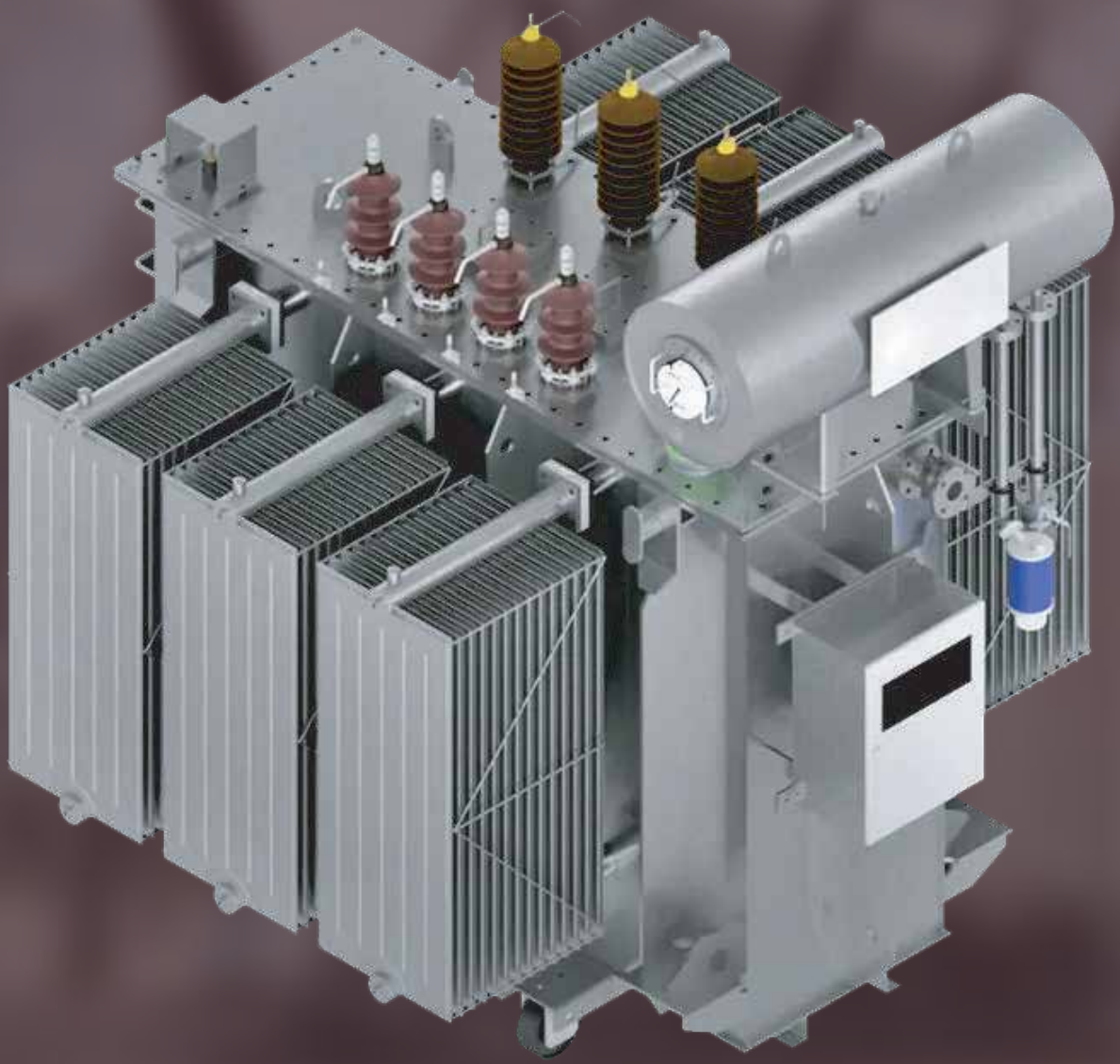
Power (kVA)	Voltage (kV)	No Load Losse (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
25	24kV	70	900	4	37	643	904	1,296	316
50		90	1,100	4	39	778	839	978	506
100		145	1,750	4	41	670	843	1,200	719
160		210	2,350	4	44	730	870	1,165	775
250		300	3,250	4	47	709	1,087	1,287	1,029
400		430	4,600	4	50	813	1,091	1,304	1,273
630		600	6,500	4	52	865	1,161	1,422	1,755
800		650	8,400	6	53	870	1,417	1,561	2,182
1,000		770	10,500	6	55	970	1,330	1,504	2,419
1,250		950	11,000	6	56	904	1,613	1,483	2,625
1,600		1,200	14,000	6	58	991	1,790	1,617	2,893
2,000		1,450	18,000	6	60	1,104	1,739	1,770	3,597
2,500		1,750	22,000	6	63	1,057	1,830	1,857	4,040

Power (kVA)	Voltage (kV)	No Load Losse (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
25	24kV	63	600	4	37	620	870	1,245	303
50		81	750	4	39	745	805	940	485
100		130	1,250	4	40	645	810	1,150	689
160		189	1,750	4	43	700	835	1,120	742
250		270	2,350	4	46	680	1,045	1,235	986
400		387	3,250	4	48	780	1,045	1,250	1,220
630		540	4,600	4	50	830	1,115	1,365	1,682
800		585	6,000	6	51	835	1,360	1,495	2,091
1,000		693	7,600	6	53	930	1,275	1,445	2,318
1,250		855	9,500	6	55	870	1,545	1,420	2,515
1,600		1,080	12,000	6	56	950	1,715	1,550	2,773
2,000		1,305	15,000	6	58	1,060	1,670	1,695	3,447
2,500		1,575	18,500	6	61	1,015	1,755	1,780	3,871

ELEKTRO EXPORT

Distribution Transformers with Expansion Tank

It is a type of transformer in which the penetration of moisture in the atmosphere into the oil is prevented with the help of silica gel (air dryer).



ELEKTRO EXPORT

Distribution Transformers with Expansion Tank Technical Details

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
25	15.8 kV	70	600	4	37	850	1,020	1,600	400
50		90	750	4	39	910	945	1,225	640
100		145	1,250	4	41	730	1,065	1,505	910
160		210	1,750	4	44	800	1,125	1,465	980
250		300	2,350	4	47	775	1,400	1,630	1,302
400		430	3,250	4	50	915	1,455	1,650	1,610
630		600	4,600	4	52	975	1,530	1,785	2,220
800		650	6,000	6	53	970	1,750	1,970	2,760
1,000		770	7,600	6	55	1,075	1,600	1,900	3,060
1,250		950	9,500	6	56	1,000	2,000	1,880	3,320
1,600		1,200	12,000	6	58	1,100	2,158	2,035	3,660
2,000		1,450	15,000	6	60	1,250	2,100	2,235	4,550
2,500		1,750	18,500	6	63	1,200	2,205	2,335	5,110

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weigh (kg)
25	33 kV	81	660	5	39	800	925	1,300	440
50		105	825	5	41	850	1,025	1,490	704
100		170	1,375	5	43	890	1,110	1,575	1,001
160		242	1,925	5	46	820	1,330	1,545	1,078
250		345	2,585	5	49	850	1,395	1,650	1,432
400		495	3,575	5	52	870	1,470	1,800	1,771
630		690	5,060	5	54	950	1,545	1,985	2,442
800		750	6,600	6	55	1,035	1,600	1,985	3,036
1,000		885	8,360	6	57	1,000	1,870	2,070	3,366
1,250		1,095	10,450	6	58	1,010	1,945	2,035	3,652
1,600		1,380	13,200	6	60	1,030	1,945	2,105	4,026
2,000		1,670	16,500	6	62	1,200	2,090	2,295	5,005
2,500		2,015	20,350	6	65	1,250	2,210	2,370	5,621

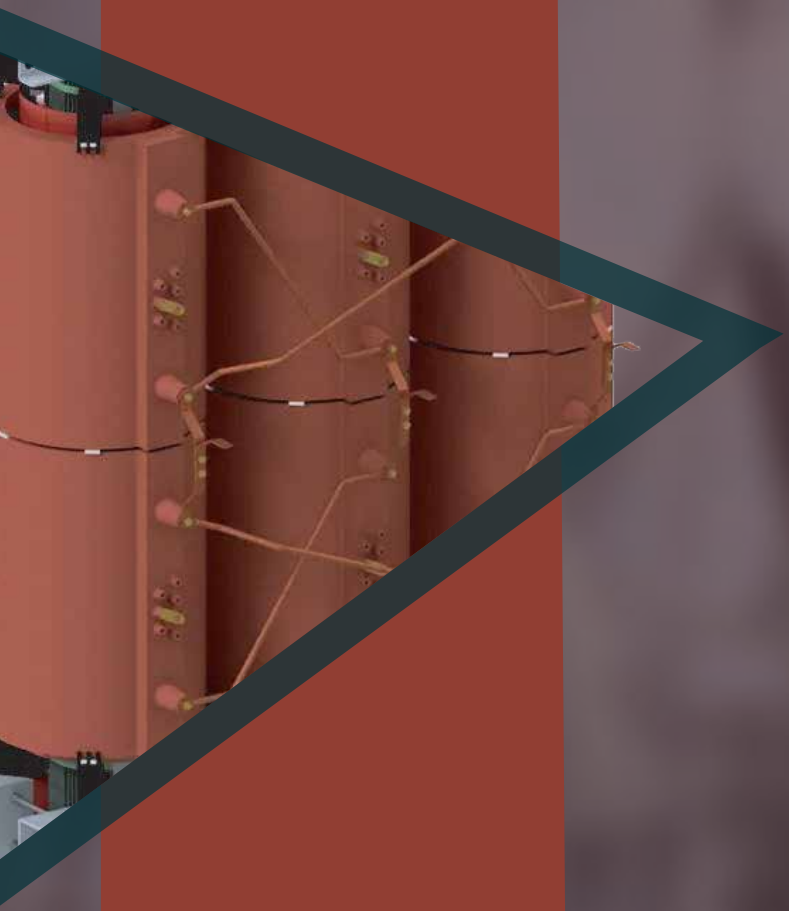
ELEKTRO EXPORT

Distribution Transformers with Expansion Tank Technical Details

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
25	24 kV	70	900	4	37	740	890	1,395	348
50		90	1,100	4	39	795	825	1,065	557
100		145	1,750	4	41	635	930	1,310	791
160		210	2,350	4	44	695	980	1,275	852
250		300	3,250	4	47	675	1,220	1,420	1,132
400		430	4,600	4	50	795	1,265	1,435	1,400
630		600	6,500	4	52	850	1,330	1,555	1,930
800		650	8,400	6	53	845	1,525	1,715	2,400
1,000		770	10,500	6	55	935	1,395	1,655	2,661
1,250		950	11,000	6	56	870	1,740	1,635	2,887
1,600		1,200	14,000	6	58	960	1,880	1,770	3,183
2,000		1,450	18,000	6	60	1,090	1,830	1,945	3,957
2,500		1,750	22,000	6	63	1,045	1,920	2,030	4,443

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weigh (kg)
25	24 kV	63	600	4	37	710	850	1,335	333
50		81	750	4	39	760	790	1,020	533
100		130	1,250	4	40	610	890	1,255	758
160		189	1,750	4	43	670	940	1,220	817
250		270	2,350	4	46	645	1,170	1,360	1,085
400		387	3,250	4	48	765	1,215	1,375	1,342
630		540	4,600	4	50	815	1,275	1,490	1,850
800		585	6,000	6	51	810	1,460	1,645	2,300
1,000		693	7,600	6	53	895	1,335	1,585	2,550
1,250		855	9,500	6	55	835	1,670	1,570	2,767
1,600		1,080	12,000	6	56	920	1,800	1,695	3,050
2,000		1,305	15,000	6	58	1,045	1,750	1,865	3,792
2,500		1,575	18,500	6	61	1,000	1,838	1,945	4,258

ELEKTRO EXPORT



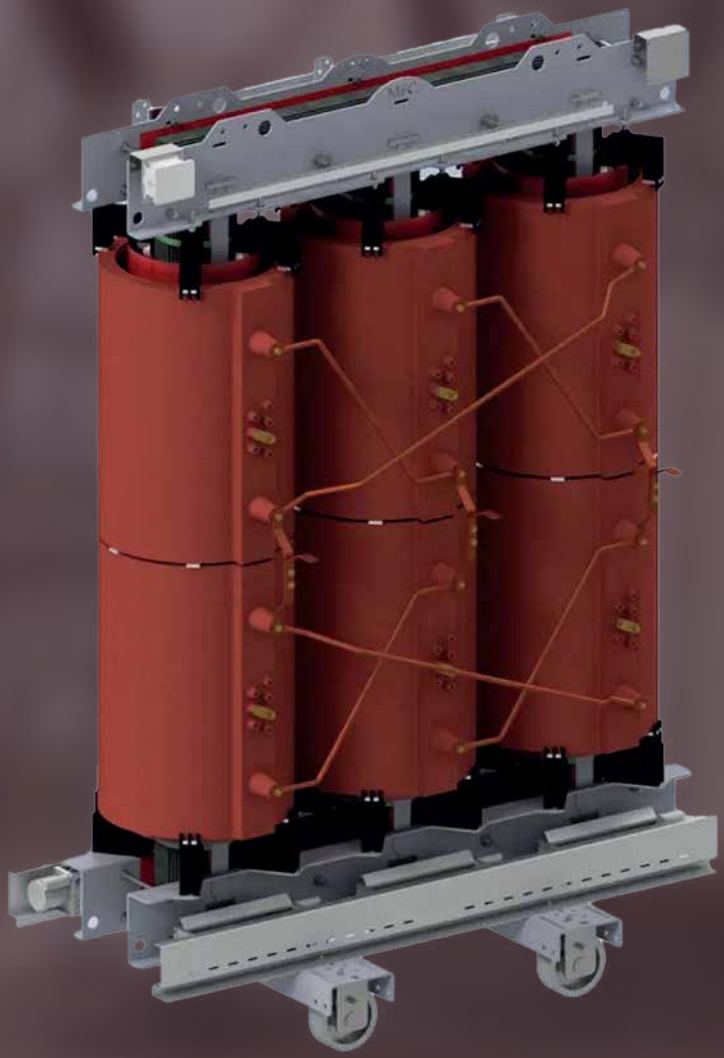
DISTRIBUTION TRANSFORMERS

Dry Type Transformer

ELEKTRO EXPORT

Dry Type Transformer

It is produced using epoxy resin in the power range of 25–25000 kVA, up to 36 kV voltage level, with the option of natural air cooling (AN) or fan cooling (AF). Dry-type transformers; can be preferred in collective living areas because they are produced using environmentally friendly materials and does not require maintenance.



ELEKTRO EXPORT

Dry Type Transformer Technical Details

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
400	<15.8 kV	750	4,500	6	60	1,500	890	1,400	1,650
630		1,100	7,100	6	62	1,560	890	1,520	2,100
800		1,300	8,000	6	64	1,600	890	1,660	2,500
1,000		1,550	9,000	6	65	1,630	1,040	1,800	2,900
1,250		1,800	11,000	6	67	1,800	1,040	1,950	3,700
1,600		2,200	13,000	6	68	1,800	1,040	1,980	4,200
2,000		2,600	16,000	6	70	1,940	1,290	2,100	4,700
2,500		3,100	19,000	6	71	2,000	1,290	2,120	5,300

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
400	<33 kV	865	4,950	6	62	1,680	990	1,970	2,190
630		1,265	7,810	6	64	1,710	1,000	2,050	2,600
800		1,495	8,800	6	66	1,800	1,020	2,100	3,000
1,000		1,785	9,900	6	67	1,860	1,100	2,150	3,450
1,250		2,070	12,100	6	69	1,950	1,110	2,200	4,150
1,600		2,530	14,300	6	70	2,060	1,120	2,260	4,900
2,000		2,990	17,600	6	72	2,100	1,290	2,480	5,800
2,500		3,565	20,900	6	73	2,210	1,290	2,500	6,600

ELEKTRO EXPORT

Dry Type Transformer Technical Details

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
400	<15.8 kV	675	4,500	6	58	1,550	890	1,445	1,750
630		990	7,100	6	60	1,610	890	1,570	2,190
800		1,170	8,000	6	62	1,650	890	1,710	2,600
1,000		1,395	9,000	6	63	1,680	1,040	1,860	3,020
1,250		1,620	11,000	6	65	1,860	1,040	2,010	2,850
1,600		1,980	13,000	6	66	1,900	1,040	2,040	4,370
2,000		2,340	16,000	6	68	2,000	1,290	2,170	4,900
2,500		2,790	19,000	6	69	2,060	1,290	2,190	5,550

Power (kVA)	Voltage (kV)	No Load Losses (W)	Load Losses at 120°C (W)	Short Circuit Impedance (%)	Noise Level (dB)	Length (mm)	Width (mm)	Height (mm)	Total Weight (kg)
400	<33 kV	775	4,950	6	60	1,730	990	2,030	2,300
630		1,140	7,810	6	62	1,770	1,000	2,120	2,700
800		1,345	8,800	6	64	1,860	1,020	2,170	3,150
1,000		1,605	9,900	6	65	1,920	1,100	2,220	3,600
1,250		1,865	12,100	6	67	2,010	1,110	2,270	4,350
1,600		2,275	14,300	6	68	2,130	1,120	2,330	5,100
2,000		2,690	17,600	6	70	2,170	1,290	2,560	6,050
2,500		3,210	20,900	6	71	2,280	1,290	2,580	6,900

ELEKTRO EXPORT



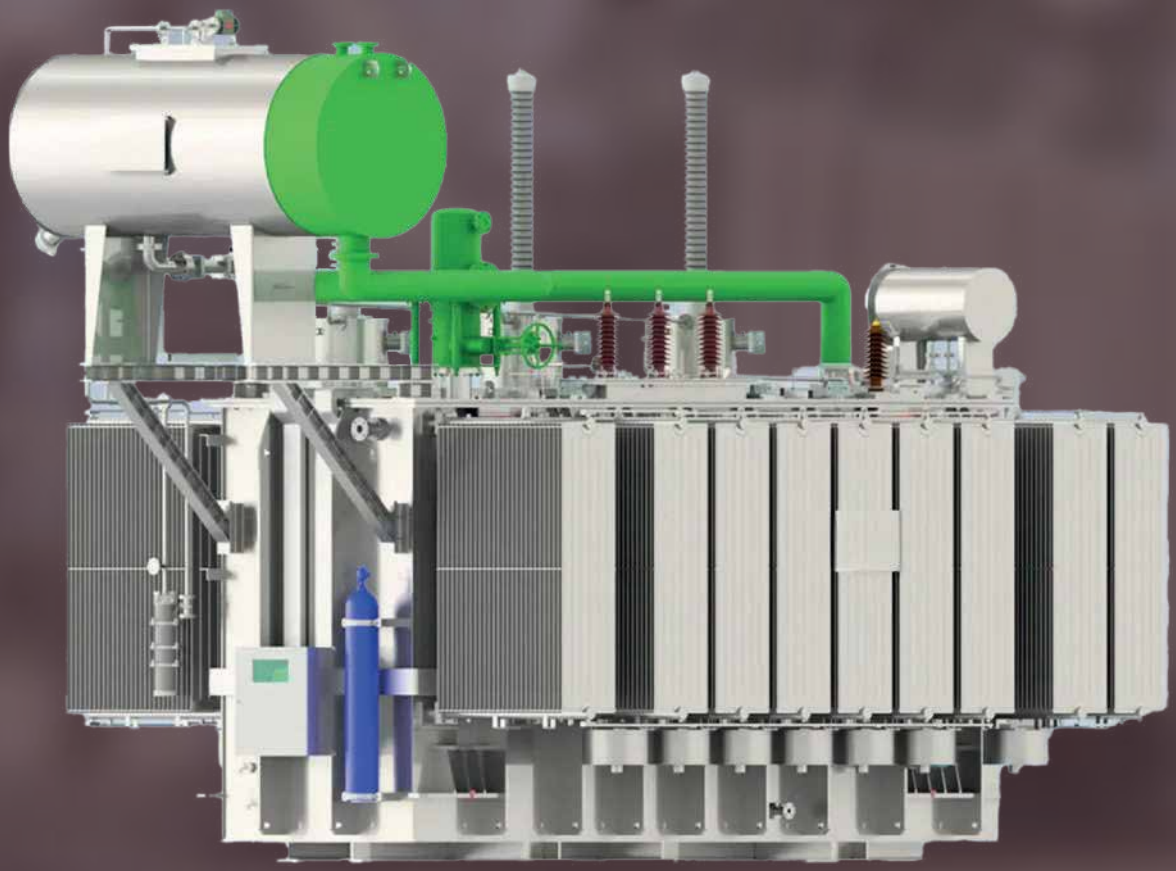
POWER TRANSFORMERS

ELEKTRO EXPORT

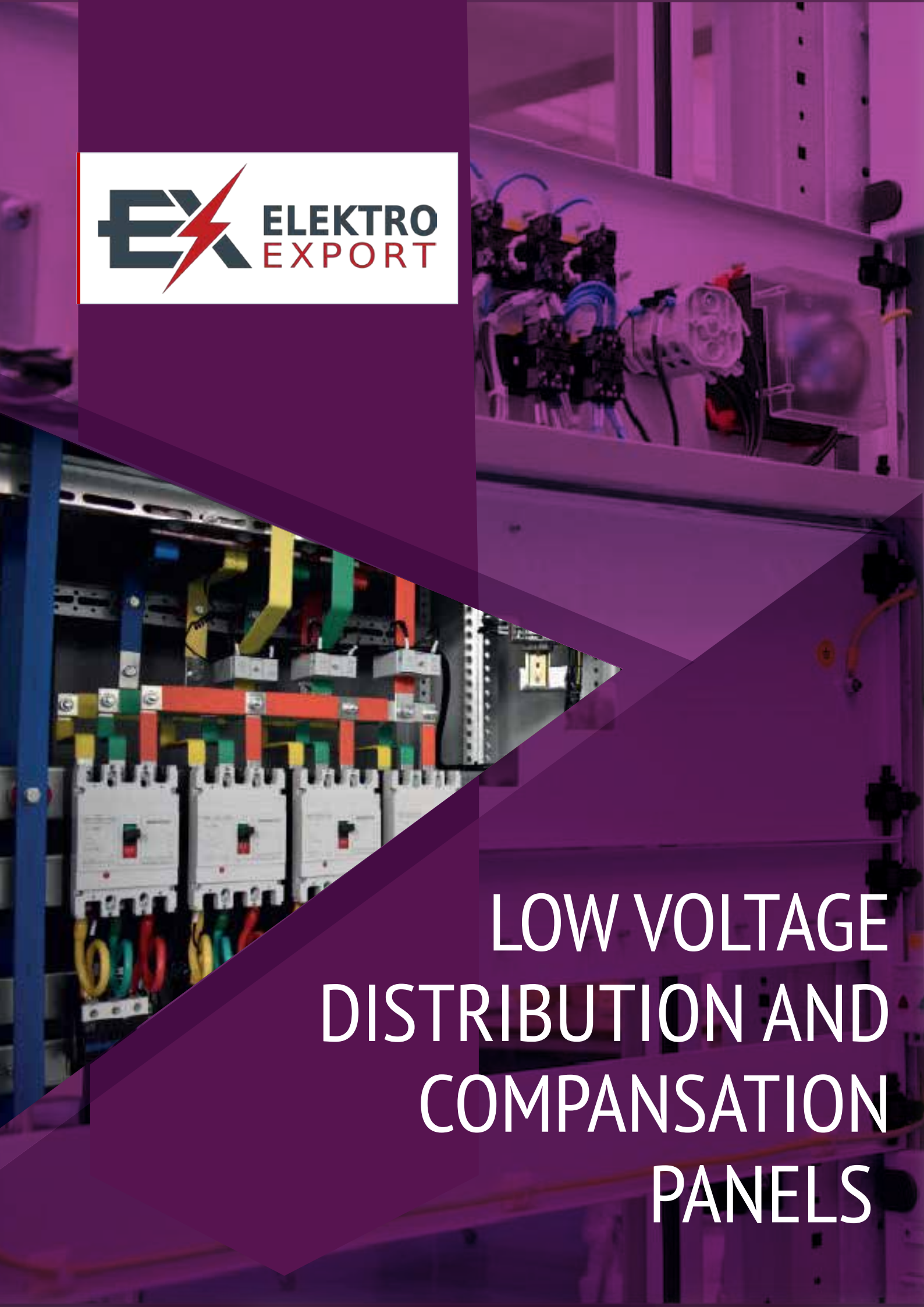
POWER TRANSFORMERS

Oil Type Power Transformers up to 100 MVA 170 kV are produced in Beta facilities. Power transformers are designed in accordance with the intended use, customer demands and working environment.

- Loss assessment
- Low noise level
- Distribution of the lightning pulse on the coil
- Behavior under short circuit conditions
- Continuous thermal resistance analysis of areas where both transient electrodynamic and high electrical voltages can occur
- Isolation structural design optimization
- Calculation of stray losses
- Thermal behavior



ELEKTRO EXPORT



LOW VOLTAGE DISTRIBUTION AND COMPANSATION PANELS

ELEKTRO EXPORT



MAIN DISTRIBUTION PANELS

ELEKTRO EXPORT

Main Distribution Panels

Panels are the distribution of incoming electrical energy that has building type transformer station consumer. The low voltage output of the transformer comes to the main distribution panel and here is the energy distribution from the intermediate board. The electricity supplied to the facility by the main distribution panel can be controlled from a single location and they use with compensation panels at large facility. They are divided into indoor and outdoor according to usage. If it is to be installed outside the facility, outdoor type should be featured. if it is to be installed inside the facility, indoor type should be featured and must be installed with self-ventilation.



ELEKTRO EXPORT



COMPENSATION PANELS

ELEKTRO EXPORT

Compensation Panels

In the electrical system; devices (electrical motor, coil etc.) that convert electrical energy to electrical energy or to another energy, can bring the phase current back or forward with magnetizing effect. Phase difference occurs between voltage and current. The compensation is called the system which is used to keep the difference near to the ideal (at 00). The panels, that provide this phase balance of the facility, are called compensation panels. Passageway must be provided with bus-bars or cables to the compensation panel from the main distribution panel. As in the main distribution panel, compensations are divided into two groups that are called outdoor and indoor.



ELEKTRO EXPORT

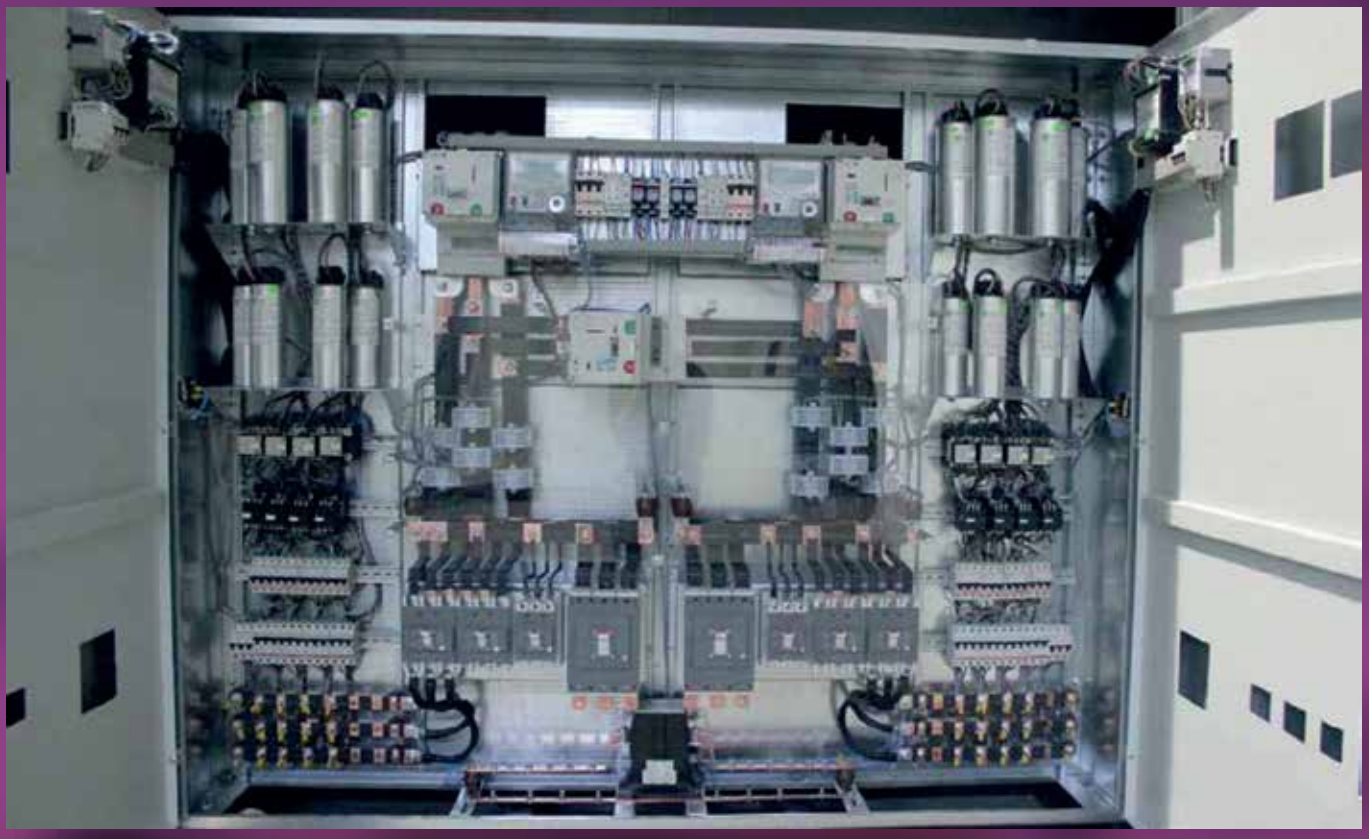


COUPLING PANELS

ELEKTRO EXPORT

Coupling Panels

Coupling means connection. Coupling is the matching of the circuits which are not on the same axis. (Different in DC). In substations, panels, which are used to set the system priority in systems with more than one energy input, are coupling panels. These panels, which are among the most important fixtures of the transformer centres, have important features such as managing the energy in the centre. The coupling panels direct energy, provide continuity, and interferes with the system in possible problems with the load circuit breaker and disconnector. Allows the system to follow continuously monitored with electronic relays integrated into them.



ELEKTRO EXPORT



BUSBAR PANELS WITH TRANSMISSION LINES

ELEKTRO EXPORT

Busbar Panels with Transmission Lines

Busbar is a prefabricated and modular system designed for the distribution and transportation of electricity. The general structure consists of a combination of aluminium or copper conductors in a metal body, in accordance with standards with insulating materials and environments. We can sort out the advantages of these panels as follows:

- It is modular and functional. Cable systems are not modular and they stay as they were first installed
- Voltage drop is at minimum level.
- The busbar strength is very high; this way short-circuit strength is at minimum level.
- Its fire resistance is more durable than others. They don't carry or transmit fire. With their halogen-free properties, they don't release toxic gas during the fire.
- Project designing is easy. Projects are produced very close to the right according to approximate strength.
- Have a modern and aesthetic look.
- Provides ease of installation without energy interruption as plug-in system.
- Maintenance and investment costs are low.

Often used at closed places as industrial facilities, hospitals, hotels, shopping centres and car parks.



ELEKTRO EXPORT



JUNCTION BOXES

ELEKTRO EXPORT

Junction Boxes

TEDAS Panels which are located at the outlets of transformer centres, distribute to facilities located at specific distances. As this distance increases, junction boxes are panels that facilities the transmission of electricity to the installations and distribute the energy. Depending on the materials and connection forms in it, 3 different options (Type-1, Type-2, and Type-3) can be produced with sheet case or glass fibre-reinforced polyester enclosure.





ELEKTRO EXPORT



LIGHTING PANELS

ELEKTRO EXPORT

Lighting Panels

The panels used for lighting in many open areas like parks, gardens, sites, motorways or large facilities such as warehouses are called lighting panels. They provide economical usage as they can be designed PLC based.



ELEKTRO EXPORT



RENEWABLE ENERGY COLLECTION PANELS

ELEKTRO EXPORT

Renewable Energy Collection Panels

It will be renewable so that when it is done, in other words, renewable energy (solar, wind, hydro, geothermal etc.) collection panels are used energy-saving facilities. Panels, which are used in measurement of the quantity and quality of energy in the system and in the distribution of the energy required for the internal requirement; they are routed to transformers with low voltage switches that can operate at high currents to increase the voltage value.



ELEKTRO EXPORT



154 kV PROTECTION PANEL

ELEKTRO EXPORT

154 kV PROTECTION PANELS

154 kV protection panels which are used for control, measurement and monitoring of primary equipment in switchyards and power plants are called controller; besides gas insulated transformer centers (GIS), panels which provide the interface between the primary equipment and the control panels are called protection panels.



ELEKTRO EXPORT



COMPENSATION PANELS

ELEKTRO EXPORT

Compensation Panels

In the electrical system; devices (electrical motor, coil etc.) that convert electrical energy to electrical energy or to another energy, can bring the phase current back or forward with magnetizing effect. Phase difference occurs between voltage and current. The compensation is called the system which is used to keep the difference near to the ideal (at 00). The panels, that provide this phase balance of the facility, are called compensation panels. Passageway must be provided with bus-bars or cables to the compensation panel from the main distribution panel. As in the main distribution panel, compensations are divided into two groups that are called outdoor and indoor.



ELEKTRO EXPORT



DIESEL GENERATORS

STANDARD TYPE CANOPY

Teksan canopies, which take up little space with their compact design and offer excellent sound insulation with the use of Teksan's Tashfoam sponge, maintain their appearance as good as new even after 3000 hours of salt tests thanks to the electro-static powder coating technology.

ADVANTAGES

- High Protection Against Corrosion and Rust
- Making Difference in Performance in Terms of Sound Insulation
- Design with Making Transportation and Maintenance Easier
- Safe Usage

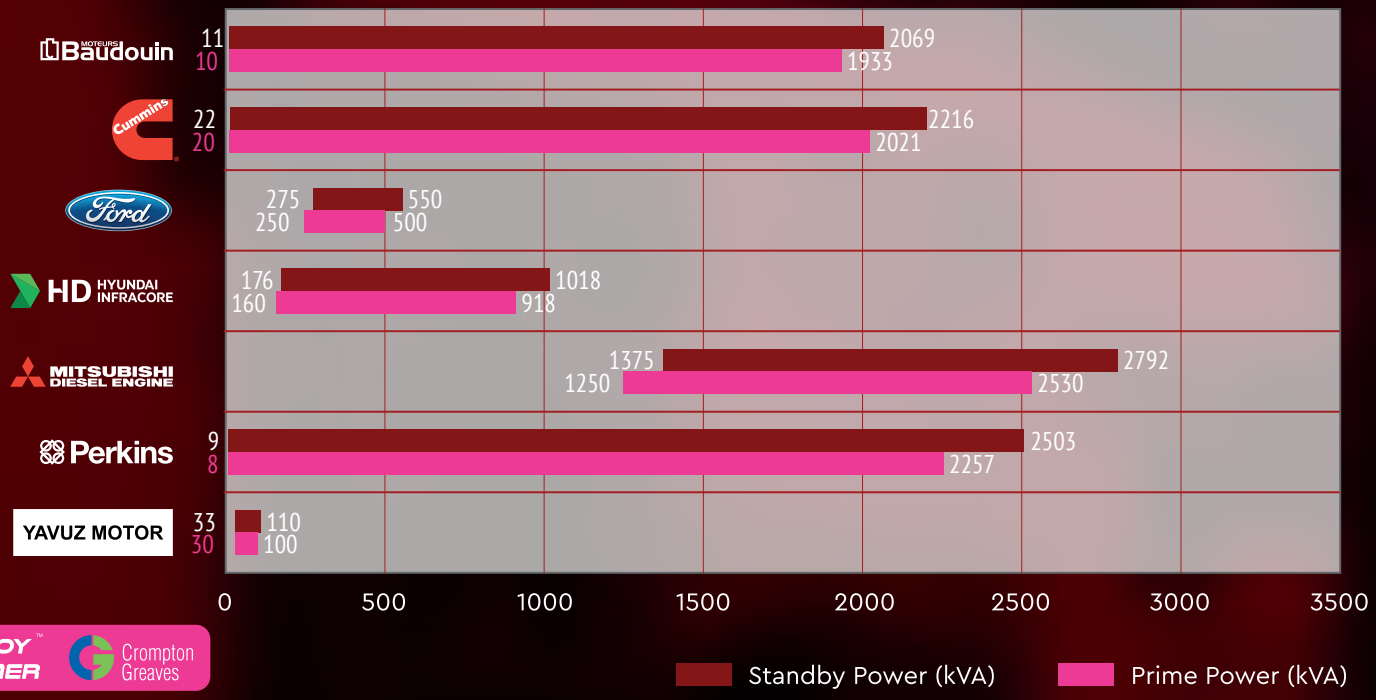
TECHNICAL DETAILS

- Compatible with 2000/14/EC directives, certified noise emission level
- 2 or 4 points transport possibility according to cabin size
- Hidden exhaust inside the canopy
- Emergency stop button located on the canopy
- Improved air suction channel to ensure homogenous cooling in the canopy
- Radiator air outlet and exhaust with designed towards above
- Lid on cab that provides to be filled up water and antifreeze easily to the radiator
- Amplified paint system against corrosion and rusting
- Improved performance in terms of sound insulation
- Demounted parts that make transportation and maintenance easier
- In accordance with customer requests, private canopy production with desired sound level/size



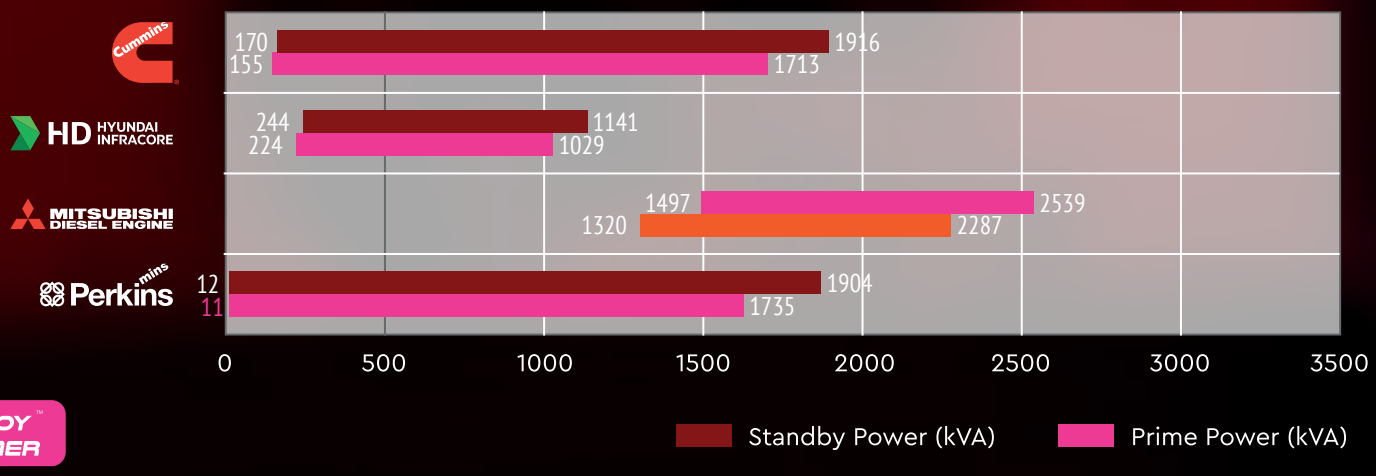
ELEKTRO EXPORT

Diesel GenSets / 50 Hz



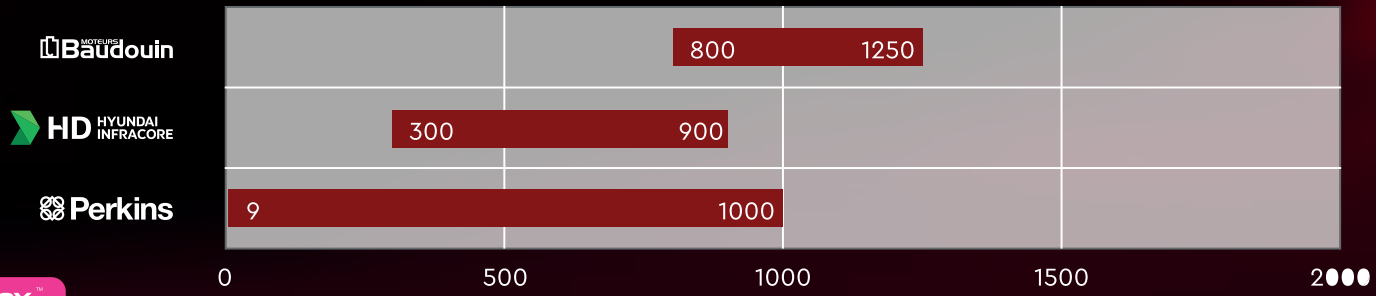
LEROY SOMER Crompton Greaves

Diesel GenSets / 60 Hz



LEROY SOMER

Diesel GenSets / UL 60 Hz



LEROY SOMER

ELEKTRO EXPORT

Diesel, Solar lighting towers provide perfect lighting in infrastructure and superstructure projects with their low operating costs, easy maintenance, and service facilities.

ADVANTAGES

- PRACTICAL
- EFFICIENT & ECONOMIC
- COMPACT
- LIGHTER
- DURABLE

TECHNICAL DETAILS

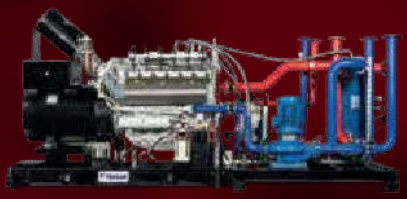
- Diesel or Solar options,
- Easy installation
- Fully modular system including improved transportation options
- Energy storage and management in Solar Lighting towers
- Solar Panels with adjustable angles
- Daylight sensitive automatic operation system for solar lighting towers
- Telescopic BOM system with 340° rotation feature
- Super quiet cabin in accordance with customer's request
- Easy maintenance possibility
- Demountable drawbar



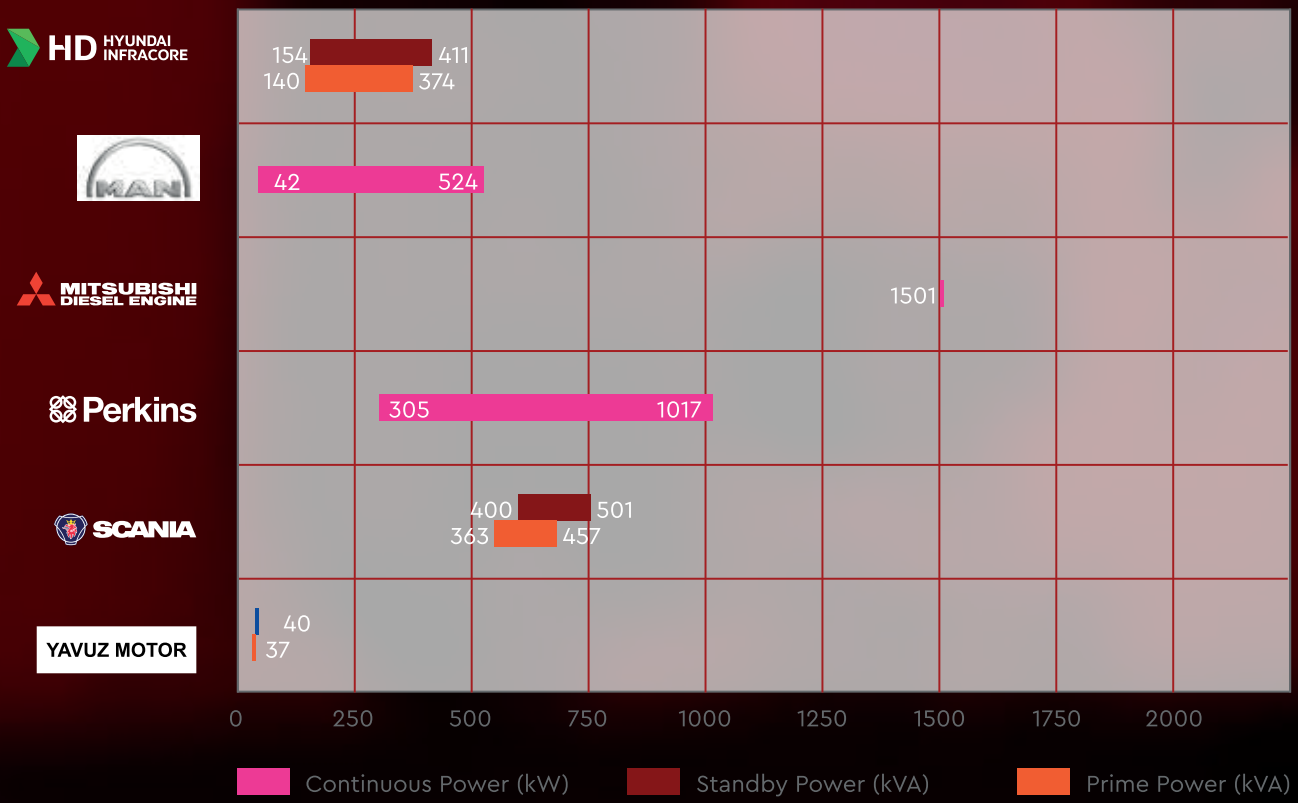
ELEKTRO EXPORT

COGENERATION POWER SYSTEMS

ELEKTRO EXPORT, thanks to its solid experience and know-how, delivers high performing natural gas and biogas-based cogeneration-trigeneration solutions with energy efficiency up to 90%.



Special Fueled GenSets / 50 Hz





ENERGY STORAGE SYSTEMS

ESS, which is a form of energy storage that stores electrical energy by converting it into electrochemical energy, consists of 4 main parts:

- Battery
- Battery Management System
- Power Management System
- Power Control System

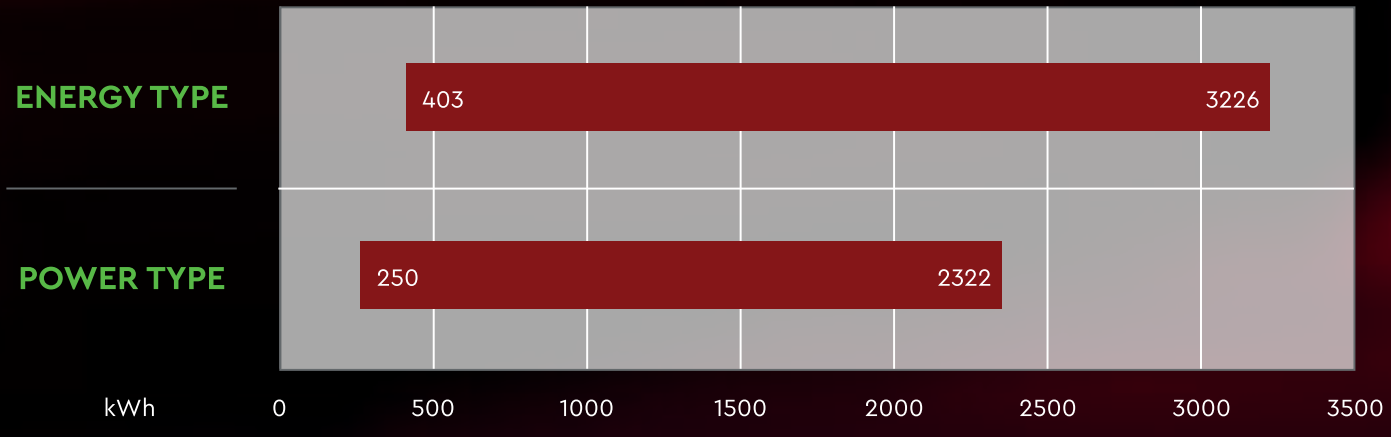
TESS is designed to suit various application types to provide solutions for different needs. Through the use of smart technologies, TESS monitors the system with instant data flow and gets automatically activated in accordance with the changing situations and requirements.

TESS' lithium ion-derived battery system is:

- Environmentally friendly
- Economical
- Longer-lasting
- Consumes fewer resources







*The capacity can be increased up to the desired power based on the project.

ELEKTRO EXPORT

Through the use of smart technologies, TESS monitors the system with instant data flow and gets automatically activated in accordance with the changing situations and requirements

ADVANTAGES

- LOW COST
- EFFICIENCY & FLEXIBILITY
- SECURE
- SMART
- LONG LASTING



ELEKTRO EXPORT

HYBRID GENERATORS

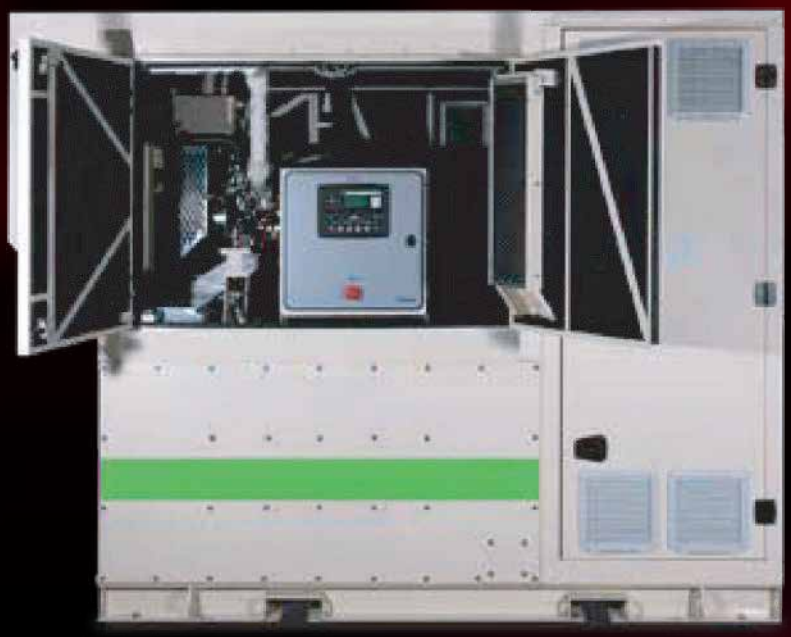
Hybrid Generator is a clean energy system powered by nature, which is easily configurable to meet requirements in a wide range of power.

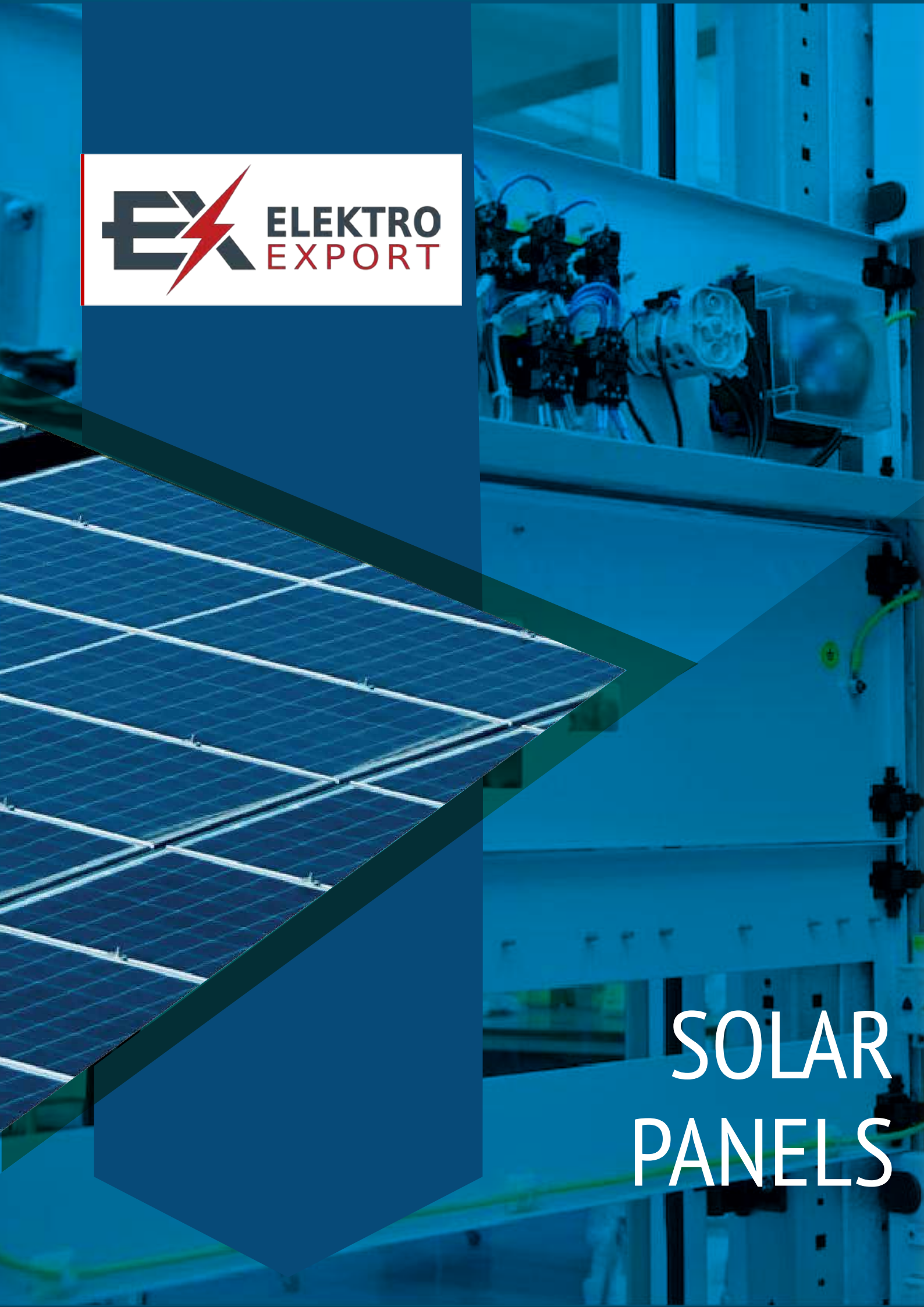
- Remote Telecom Base Stations
- Oil Well-heads & Signalization Nodes
- Off-shore Platforms
- Remote Military Platforms
- Meteorological Measurement Stations
- Residential Areas without Electricity Grid Connection
- Outdoor Events & Camping



ELEKTRO EXPORT

- Reduced Maintenance Costs
- Our products continue to work up to 1000 hours without the need for maintenance and technical service
- Affordable Investment
- Investment payback period down to 2 years
- Reduction in OPEX
- With the contribution of renewable energy use, generator operating time has been reduced by 80%. With the use of variable speed engine and fuel optimization algorithm, 65% fuel savings are achieved
- Tailor-made Solutions
- We offer different solutions to customer demand
- Ultra Silent Canopy
- Decreased sound level from 65 dBA @1m is provided with custom design solutions
- Remote Monitoring




ELEKTRO
EXPORT
SOLAR
PANELS

ELEKTRO EXPORT

MULTI BUSBAR CELL TECHNOLOGY

With the multi busbar cell technology, it is aimed to reduce the resistance loss and the related power loss. To combat power loss, our half cut cells improve current carrying in the panel. The multi busbar design restricts the movement of electrons in the circuit, which increases conduction and reduces the strength of the internal resistance. Thus, the rate of resistance losses decreases. Our panels of half-cut cells divide the internal current in the system, improving performance, longevity and shade tolerance. Significantly reduces thermal loss as it has half the operating current.





BIFACIAL PANEL TECHNOLOGY

With the multi busbar cell technology, it is aimed to reduce the resistance loss and the related power loss. To combat power loss, our half cut cells improve current carrying in the panel. The multi busbar design restricts the movement of electrons in the circuit, which increases conduction and reduces the strength of the internal resistance. Thus, the rate of resistance losses decreases. Our panels of half-cut cells divide the internal current in the system, improving performance, longevity and shade tolerance. Significantly reduces thermal loss as it has half the operating current.

ELEKTRO EXPORT

DOUBLE SIDED PANEL TECHNOLOGY

Superior panel efficiency with low resistance loss provides.





BIFACIAL CELL TECHNOLOGY

With multi busbar technology. Provides high power generation.

BIFACIAL CELL TECHNOLOGY

Even in poor light conditions provides high power generation.



525W - 550W

BF 182 Mono PERC 10 BB Half - Cut 72x2

Design Parameters

Product Model	PS-MO-BFHC-GG-XXX
Cell Type	BF 182 Mono PERC 10BB
Number of Cells	Half Cut 72x2
Glass	2 mm + 2 mm
Back Cover	Glass
Frame	Anodized Aluminium Alloy
Output Cables	1200-1100-300 mm 1x4,0 mm2
Junction Box	IP68 Rated

Packing

Weight	33 kg
Dimension	2285mm-1134mm / 30x30 Gray
Pieces	37 pcs/pallet
Truck	592 pcs / Truck

Temperature Ratings

Temperature Coefficient of Pmax	-0,36% (°C)
Temperature Coefficient of Voc	-0,30%(°C)
Temperature Coefficient of Isc	0,05%(°C)
Operating Temperature (°C)	-40(°C)~+85(°C)

Electrical Limits

Maximum System Voltage	1500V DC (IEC & UL)
Maximum Series Fuse Rating	25 A
Power Tolerance	0~+3%

Mechanical Limits

Front Side Static Design Loading	3600 Pa
Back Side Static Design Loading	1600 Pa
Hailstone	d: 25mm, 23 m/s

Related Standards

TS EN 61215-1 / 20.03.2017
TS EN 61730-2 / 19.11.2018
TS EN 61215-2 / 18.12.2017
TS EN IEC 61730-1 / 19.11.2018
TS EN 61730-1 / 31.01.2008
TS EN 61215-1-1 / 09.12.2016

Electrical Characteristics

Power Class	550		545		540		535		530		525	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Module Efficiency	21,49%		21,20%		21,02%		20,81%		20,66%		%20,46	
Maximum Power (Pmax)	550	408,32	545	404,61	540	400,90	535	397,18	545	404,61	545	404,61
Maximum Power Voltage (Vmp)	41,50	35,76	41,30	35,59	41,10	35,41	40,90	35,24	41,30	35,59	41,30	35,59
Maximum Power Current (Imp)	13,25	11,42	13,20	11,37	13,14	11,32	13,08	11,27	13,20	11,37	13,20	11,37
Open Circuit Voltage (Voc)	50,10	43,17	49,90	43,00	49,70	42,82	49,50	42,65	49,90	43,00	49,90	43,00
Short Circuit Current (Isc)	13,99	12,05	13,96	12,03	13,90	11,98	13,84	11,92	13,96	12,03	13,96	12,03

*Standart Test Conditions (STC): irradiance 1000W/ m2 ,A.M 1,5, cell temperature 25 °C
*Nominal Operating Cell Temperature (NOCT): irradiance 800W/ m2 , A.M 1.5 , Ambient temperature 20 °C , Wind 1 m/s.Diagrams for STC.

525W - 550W

BF 182 Mono PERC 10 BB Half - Cut 72x2

Design Parameters

Product Model	PS-MO-BFHC-XXX
Cell Type	BF 182 Mono PERC 10BB
Number of Cells	Half Cut 72x2
Glass	3,2 mm
Back Cover	PET Transparent
Frame	Anodized Aluminium Alloy
Output Cables	1200-1100-300 mm 1x4,0 mm2
Junction Box	IP68 Rated

Packing

Weight	27,5 kg
Dimension	2279mm-1134mm / 35x35 Gray
Pieces	32 pcs/pallet
Truck	704 pcs/ Truck

Temperature Ratings

Temperature Coefficient of Pmax	-0,36% (°C)
Temperature Coefficient of Voc	-0,30%(°C)
Temperature Coefficient of Isc	0,05%(°C)
Operating Temperature (°C)	-40(°C)~+85(°C)

Electrical Limits

Maximum System Voltage	1500V DC (IEC & UL)
Maximum Series Fuse Rating	25 A
Power Tolerance	0~+3%

Mechanical Limits

Front Side Static Design Loading	3600 Pa
Back Side Static Design Loading	1600 Pa
Hailstone	d: 25mm, 23 m/s

Related Standards / Certificate

TS EN 61215-1 / 20.03.2017
TS EN 61730-2 / 19.11.2018
TS EN 61215-2 / 18.12.2017
TS EN IEC 61730-1 / 19.11.2018
TS EN 61730-1 / 31.01.2008
TS EN 61215-1-1 / 09.12.2016

CE

TSE

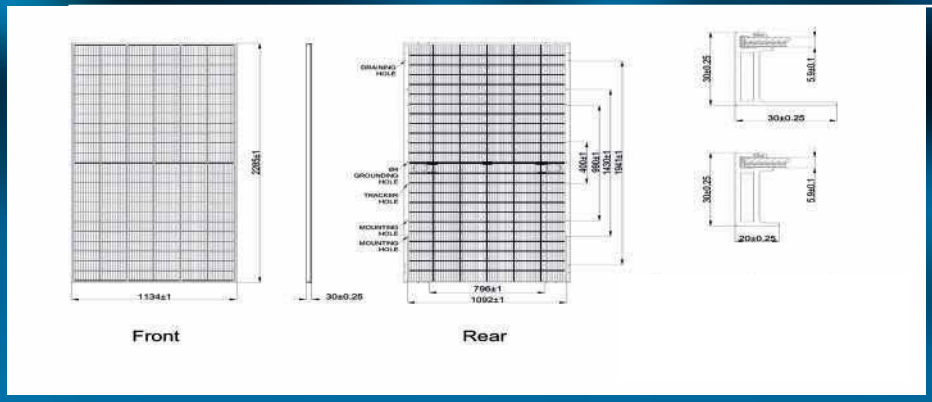
Electrical Characteristics

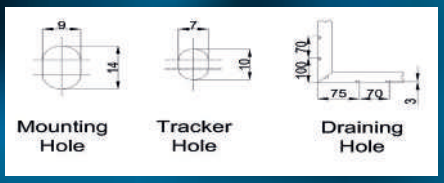
Power Class	550		545		540		535		530		525	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Module Efficiency	%21,37		%21,09		%20,90		%20,70		%20,55		%20,35	
Maximum Power (Pmax)	550	408,32	545	404,61	540	4400,90	535	397,18	530	393,47	525	389,76
Maximum Power Voltage (Vmp)	41,50	35,76	41,30	35,59	41,10	35,41	40,90	35,24	40,85	35,20	40,82	35,17
Maximum Power Current (Imp)	13,25	11,42	13,20	11,37	13,14	11,32	13,08	11,27	12,97	11,18	12,86	11,08
Open Circuit Voltage (Voc)	50,10	43,17	49,90	43,00	49,70	42,82	49,50	42,65	49,45	42,61	49,40	42,56
Short Circuit Current (Isc)	13,99	12,05	13,96	12,03	13,90	11,98	13,84	11,92	13,74	11,84	13,64	11,75

*Standart Test Conditions (STC): irradiance 1000W/ m2 ,A.M 1,5, cell temperature 25 °C
*Nominal Operating Cell Temperature (NOCT): irradiance 800W/ m2 , A.M 1.5 , Ambient temperature 20 °C , Wind 1 m/s". Diagrams for STC.

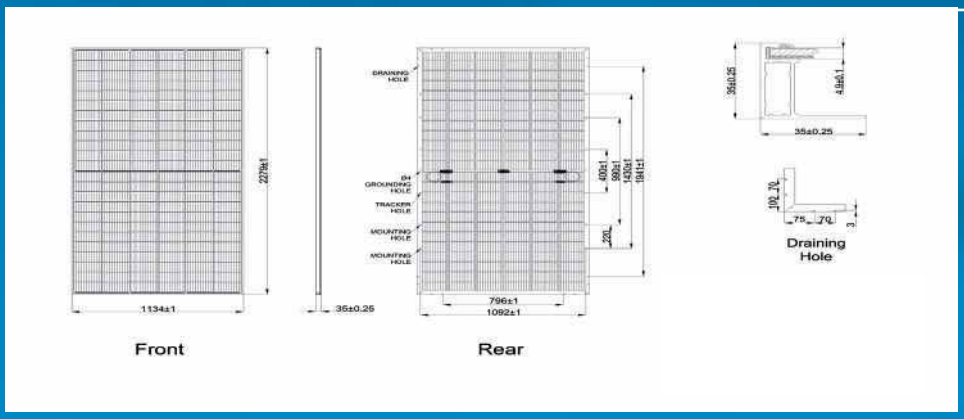
ELEKTRO EXPORT

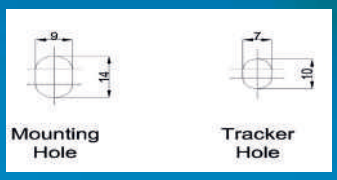
525W – 550W BF 182 Mono PERC 10 BB Half - Cut 72x2



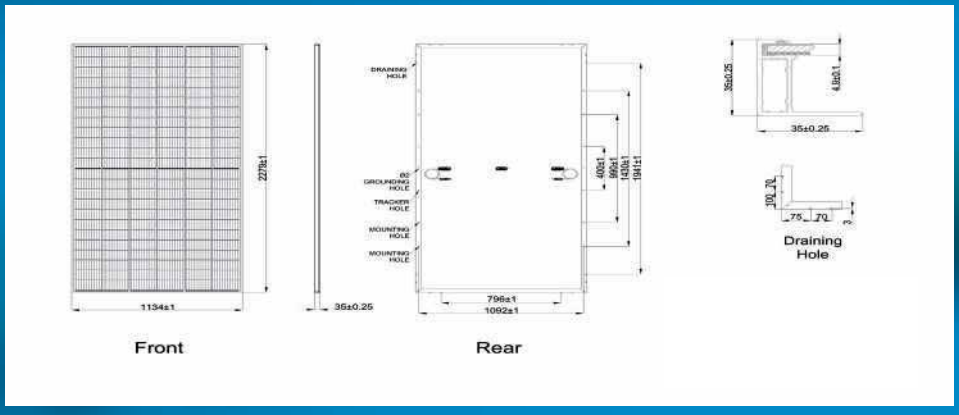


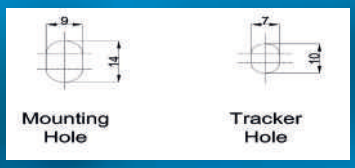
525W – 550W BF 182 Mono PERC 10 BB Half - Cut 72x2





525W – 550W BF 182 Mono PERC 10 BB Half - Cut 72x2





525W - 550W

BF 182 Mono PERC 10 BB Half - Cut 72x2

Design Parameters

Product Model	PS-MO-HC-XXX
Cell Type	BF 182 Mono PERC 10BB
Number of Cells	Half Cut 72x2
Glass	3,2 mm
Back Cover	Beyaz Arka Plan
Frame	Eloksallı Alüminyum Ala ım
Output Cables	1200-1100-300 mm 1x4,0 mm2
Junction Box	IP68 Rated

Packing

Weight	27,5 kg
Dimension	2279mm-1134mm / 35X35 Gray
Pieces	32 pcs/pallet
Truck	704 pcs/ Truck

Temperature Ratings

Temperature Coefficient of Pmax	-0,36% (°C)
Temperature Coefficient of Voc	-0,30%(°C)
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TS EN 61215-1-1 / 09.12.2016