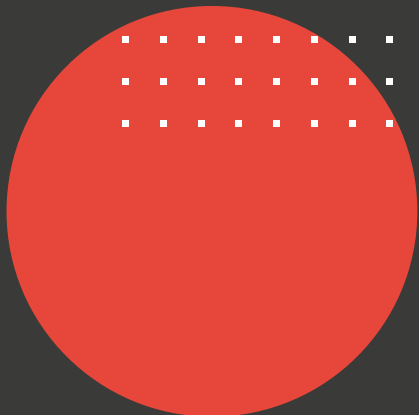






The SPECENERGO Company is an industrial enterprise, one of the leading Russian manufacturers of transformer substations of various voltage classes. We produce transformer substations with a geography of supplies throughout Russia, including the Far East, the Far North and the Arctic.

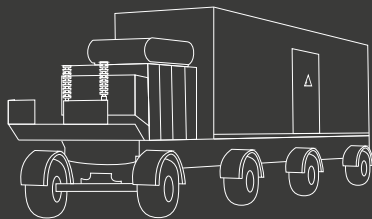
The company is an accredited supplier of:

- 35-110 kV transformer substations for PJSC Rosneft;
- transformer substations with a capacity of up to 80 MVA, voltage up to 220 kV of PJSC Gazprom.

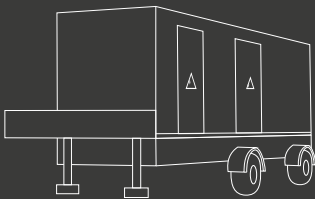
As well as a certified supplier of CPTS for subsidiaries of PJSC ROSSETI.

The total number of produced substations is

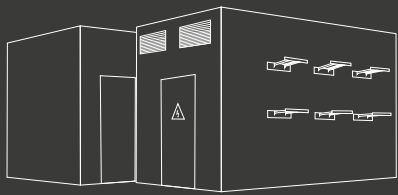
more than **570**



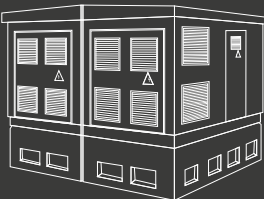
Mobile modular substations (MMS) of 35 - 220 kV



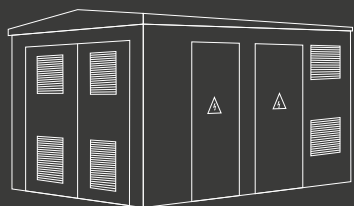
Mobile Distribution Substations (MDS)



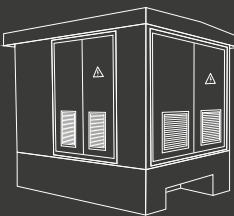
Modular Transformer Substation (MTS) 35-110 kV



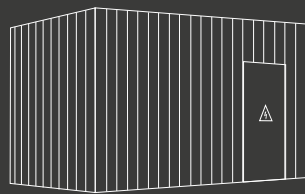
Concrete Packaged Transformer Substation (CPTS)



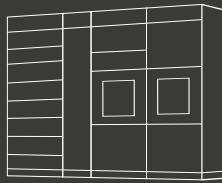
Packaged Transformer Substation (PTS)



Small-sized Concrete Transformer Substation (SCTS)

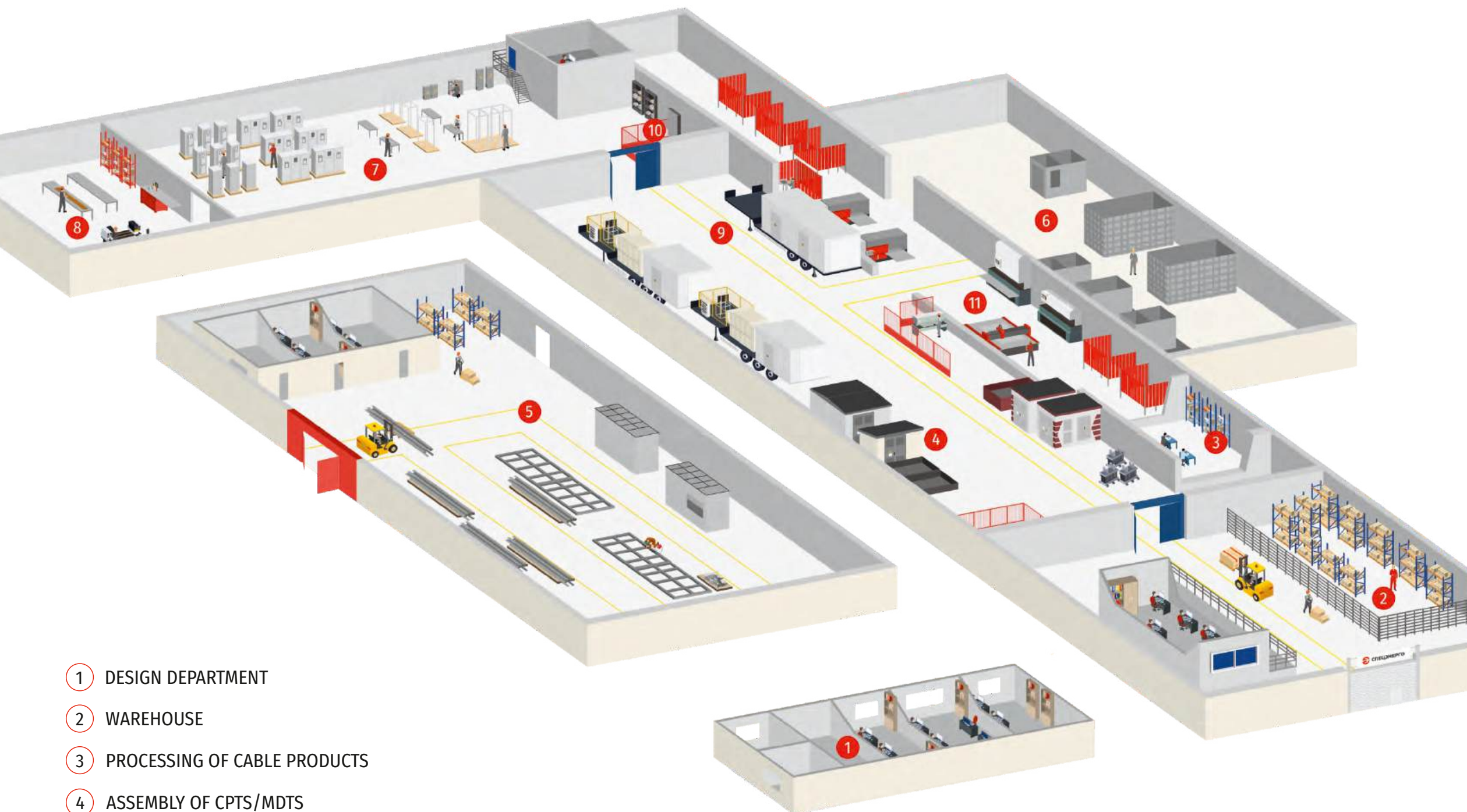


Modular structures



Low voltage electrical switchboard





- ① DESIGN DEPARTMENT
- ② WAREHOUSE
- ③ PROCESSING OF CABLE PRODUCTS
- ④ ASSEMBLY OF CPTS/MDTS
- ⑤ PREPARATION AND ASSEMBLY OF METAL STRUCTURES
- ⑥ CONCRETE GOODS PRODUCTION
- ⑦ ASSEMBLY OF LOW VOLTAGE EQUIPMENT
- ⑧ COPPER BUSBAR MANUFACTURING SITE
- ⑨ SUBSTATION ASSEMBLY
- ⑩ ELECTROLAB
- ⑪ WELDING SECTION

PRODUCTION CAPACITY

The company operates modern production facilities that enable a complete in-house manufacturing cycle. Our machine park includes advanced equipment for cutting, bending and final product assembly.

A dedicated precast concrete production line is operational on-site, manufacturing reinforced concrete elements used to create concrete enclosures for substations.

The entire manufacturing process is carried out using high-tech equipment that complies with international quality standards. This allows us to guarantee the reliability and precision of each finished product unit.

PRODUCTION
AREA

12 500 sq.m.

PRODUCTION POTENTIAL

10 MMS per year

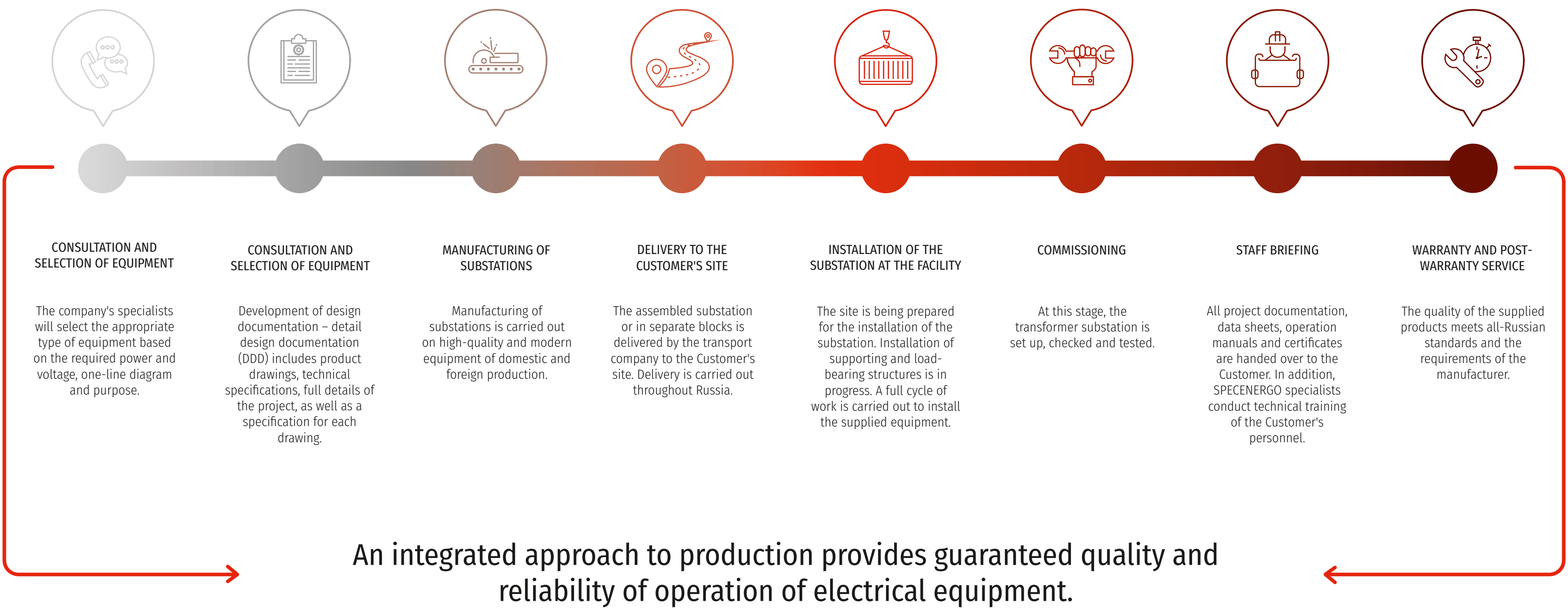
5 MTS per year

150 PTS per year

140 CPTS per year



COMPREHENSIVE APPROACH

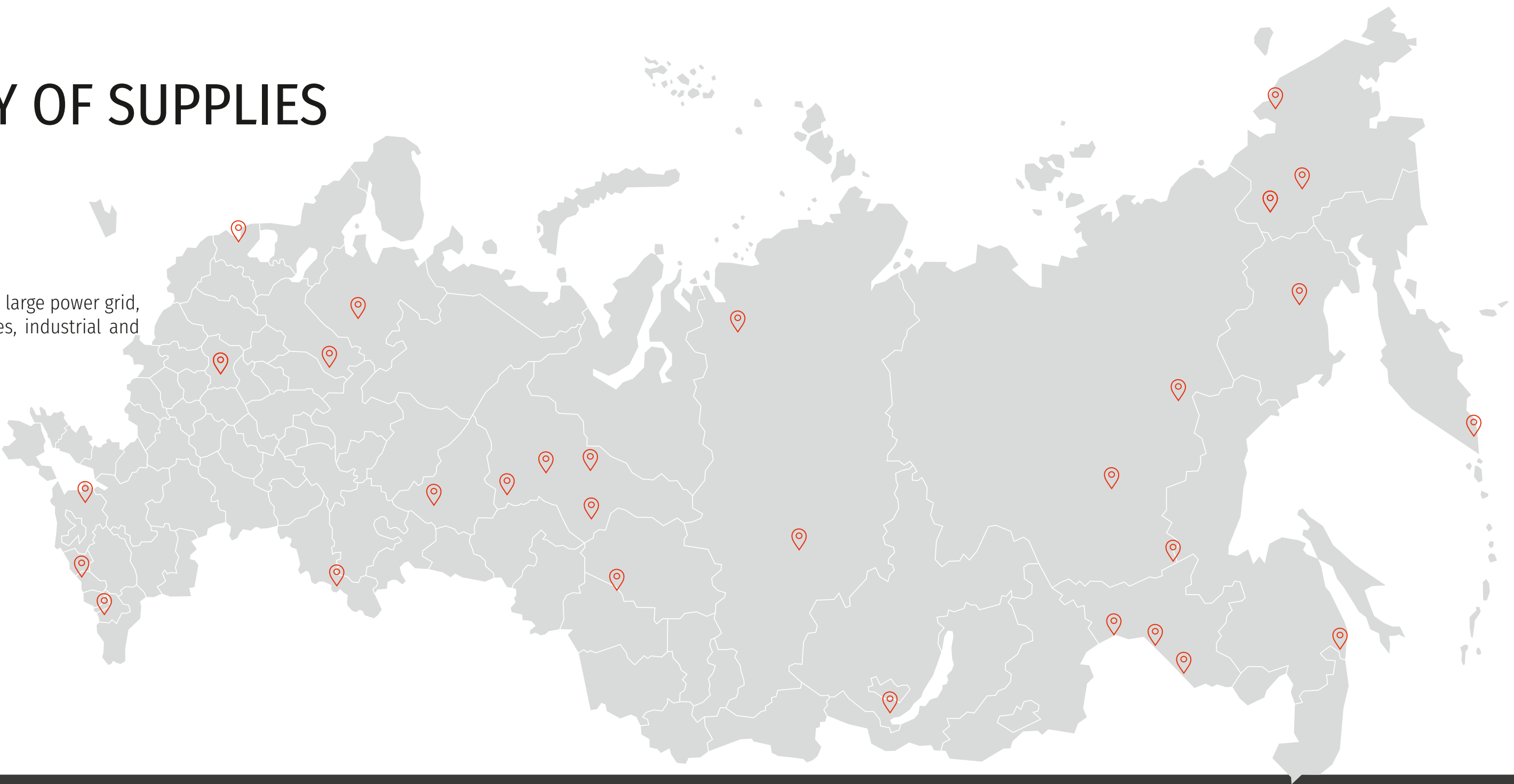


GEOGRAPHY OF SUPPLIES

CUSTOMERS

Among our regular customers are large power grid, oil and gas processing companies, industrial and large construction companies.

- MMS - mobile modular substations
- MS - modular substations
- PTS - packaged transformer substation
- CS - closed switchgear
- GSCP - general substation control point



Amur Region
CS 10 kV for SS 220 kV for Power of Siberia

Blagoveshchensk
CS 35 kV for SS 110 kV Agrokompleks

Vologda Region
CS & GSCP for SS 35 kV Molochnoe

Grozny
Two MMS 110/35/10 kV 25 MVA & MMS 35/10 kV 16 MVA for Chechenenergo JSC

Yekaterinburg
MMS 110/10(6) kV for SS 110 kV Gornyy Shchit

Irkutsk
MMS 110/10(6) kV 40 MVA for JSC IESC

Krasnodar Territory
CS 35 kV for Vekhnebalkarskaya small-scale HPP

Kaluga Region
MMS 110/10(6) kV 25 MVA for SS 220 kV Sozvezdie

Krasnoyarsk Territory
MMS 35/6 kV 2x25 MVA for Veduginskoe gold deposit

Leningrad Region
MS 35 kV for SS 35 kV Lesogorskaya
CS 10 kV & GSCP for SS 35 kV Kamennogorsk
CS & GSCP for SS 35 kV Bukhta
CS & GSCP for SS 35 kV SS 110 kV Plodovoe

Moscow
Two MMS 110/10 kV 25 MVA, two MMS 110/10 kV 20 MVA, MMS 110/10 kV 40 MVA, MMS 35/10(6) kV 16 MVA for Rosseti Moscow Region PJSC

Magadan Region
MMS 110/10(6) kV 10 MVA for Lunnoe processing plant

Naberezhnye Chelny
MS 110/10 kV 2x25 MVA for SS 110/10 kV Haier

Nenets Autonomous Area
MMS 35/0,4 kV 2x1600 kVA for Naul'skoye oil field

Orenburg Region
Two MMS 110/10 kV 6,3 MVA for Sladkovsko-Zarechnoe Oil Company
MMS 110/10(20) kV 25 MVA for Rybkinskoe oil field
MMS 110/20(10) kV 25 MVA for SS 110 kV Rybkinskaya
MMS 110/35 kV 25 MVA for SS 110 kV Savelevskaya

Petropavlovsk-Kamchatsky
CS 10 kV with GSCP for SS 110 kV Zelenovskie Ozerki
CS 10 & 35 kV for SS 35 kV Turisticheskiy Klaster

Republic of Sakha (Yakutia)
MMS 110/6 kV 16 MVA for Novolenskoye TPP
MMS 110/10 kV 10 MVA for Tas-Yuryakhskoye oil field
Two MMS 35/6(10) kV for Kuranakhskoye ore field
Two MMS 35/6 kV 6,3 MVA & MMS 35/6 kV 2,5 MVA for El'ginskoye coal complex
PTS 6/0,4 kV 2x630 kBA for Nezhdaninskoye oil field

Republic of Khakassia
MMS 110/10 kV 25 MVA for Chernogorskoye deposit

Saint Petersburg
MMS 110/10(6) kV 25 MVA for SS 110 kV Lensovetovskaya
MS 35/10 kV for SS 35/10 kV Pesochnaya
MS 35/6 kV for SS 35 kV Osinovaya Roshcha
MS 35/10 kV for SS 35 kV Ol'gino
CS 10 & 35 kV, PTS 10 & 35 kV, LVES ORTA for Rosseti Lenenergo PJSC

CS 6 & 35 kV for SS 110 kV Institut im. Krylova
PTS 10/0,4 kV 2x2500 kVA for SS 10 kV Expoforum

Sovetskaya Gavan
2PTS 6/0,4 kV 250 & 1000 kBA for Sovgavanskoj TPP

Khanty-Mansi Autonomous Area – Yugra
Two MMS 35/10 kV 2x6,3 MVA for Untygejskoe oil field
MMS 110/35/10(6) kV 25 MVA for Rosseti Tyumen JSC
MMS 35/6 kV 6,3 MVA for JSC RN-Nyaganneftegaz
Two MMS 35/6 kV 6,3 MVA for JSC RN-Yuganskneftegaz
Three MMS 110/10 kV 25 MVA for Rosneft Oil Compan
MS 35/10 kV for Untygejskoe oil field

Chukotka Autonomous Area
MMS 110/10(6) kV 25 MVA for SS 220 kV Peschanka
Automatic Sectioning Point (ASP) 110 kV for 110 kV aerial line Bilibino – Peschanka — SS 110 kV Kekura



MOBILE MODULAR SUBSTATIONS (MMS) 35 - 220 KV

MMS for rated voltage up to 220 kV are designed to receive, convert and distribute electric power of alternating three-phase current with a frequency of 50 Hz when operating in a temperature range of -60 to +55 °C.

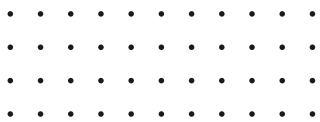
A distinctive feature of MMS is the convenience of its transportation to the most remote and unsettled areas, thanks to the placement of equipment on mobile platforms.

MMS are used to back up the main equipment of a stationary substation in the event of emergency outages, temporary connection to the power grid of facilities under construction in the absence of power supply during the construction period, as well as temporary connection of consumers to the power grid for the period of reconstruction of an existing stationary substation.



ADVANTAGES

-  Full factory readiness
-  Reduced footprint
-  Operation in any climatic conditions
-  Reduced commissioning time
-  Mobility and ease of transportation by cars



more about MMS

Mobile modular substations (MMS) 110/10(6) kV 10 MVA

SC Silver of Magadan
Lunnoye Mining and Processing Plant, Magadan Region



In the mining complex, the features of the use of MMS are associated with the fact that some of the ore deposits are located in remote areas with a harsh climate. This determines the additional requirements for the equipment by the placement category. For the development of such deposits, a significant argument in favor of the choice of MMS is the possibility of manufacturing and setting up a substation in factory conditions, the convenience of its transportation to the most remote and undeveloped areas.

The installation of the MMS in this case is the first stage of construction of the entire infrastructure of the mining and processing plant.

Mobile modular substations (MMS) 35/10 kV 2x6,3 MVA

Subsidiary of JSC Neftisa - CanBaikal LLC
Untygejskoe oil field, Khanty-Mansi Autonomous Okrug



In the oil and gas complex, MMS are often used as an alternative to stationary substations as a ready-made mobile solution for alternate field development. With the help of the MMS, the power supply of oil and gas fields is organized, and then this MMS can be used at the new facility.

This approach reduces the costs of oil and gas companies for the construction of substations and access roads, as well as for the purchase of electrical equipment.

Mobile packaged Transformer Substation (MPTS) 10/0,4 kV 1600 kVA

Rosenergoatom JSC - Floating nuclear power plant (FNPP) Akademik Lomonosov Pevek, Chukotka Autonomous Area



Substations of this type are products of maximum factory availability, which allows reducing deployment time at the installation site.

The installed reinforced semi-trailer with leaf spring suspension makes it possible to carry out multiple transportation of substations in the off-road conditions of the Far North. The climatic design of the container ensures the normal operation of the electrical equipment installed inside at extremely low temperatures.

Mobile packaged Transformer Substation (MPTS) 10(6)/0,4 kV 2x630 kVA

PJSC Rosseti Lenenergo Emergency stock, Saint-Petersburg



MPTS is used in case of damage to the main (stationary) equipment of the substation, at the time of emergency recovery work, as well as for the reconstruction of the power grid.

The MPTS allows reducing costs and terms for design and commissioning, minimizing work on land acquisition, and also does not require the arrangement of a site for installing a substation at the facility.

MOBILE DISTRIBUTION SUBSTATIONS (MDS) 10(6) KV

MDS are used as a backup substation of 10/0.4 kV in case of damage to the main (stationary) equipment of the substation during emergency recovery work and for the reconstruction of the power grid.

The design of the MDS is based on a heat-insulated container with lighting, heating and ventilation systems, inside which the main and secondary equipment is mounted. Container with equipment is installed on low floor trawls, which allows to repeatedly transport the substation, to avoid the use of lifting devices in the installation of a temporary scheme, as well as reduce transport costs by avoiding the transport of oversized cargo (overall dimensions of the MDS corresponds to the size of cargo transport for traffic on public roads of Russia).



ADVANTAGES

-  Full factory readiness
-  Preservation of landscaping during the installation of MDS
-  Possibility of driving on public roads of the Russian Federation
-  Reduced commissioning time
-  Mobility and ease of transportation by cars



MOBILE CLOSED SWITCHGEAR DEVICES (MCSG) 10(6) KV

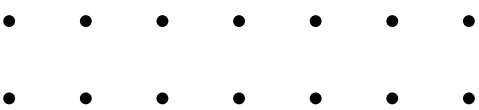
MCSGs are intended for the operative replacement of the switchgear device of the existing substation for the period of its repair, in order to provide power supply to consumers according to a temporary scheme.

MCSGs are used in power supply systems of objects of the oil and gas industry, agriculture, mining industry.



ADVANTAGES

-  Full factory readiness
-  Deployment speed - 2 hours
-  Possibility of driving on public roads of the Russian Federation
-  Reduced delivery time to the work site
-  Mobility and ease of transportation by cars



Mobile modular substation on sleds (MMS) 35/6 kV 2x25 MVA

JSC Polymetal
Amikan Mining Company's Processing Plant, Krasnoyarsk Krai



Packaged Transformer Substation on sleds (PTSS) 6/0,4 kV 2x630 kVA

Polymetal International plc
Nezhda gold deposit



MMS on sleds are used for power supply of objects in harsh climatic conditions (up to -60 degrees).
To transport MMS to the place of operation, the equipment is installed on a single "sleigh" type structure. This solution allows you to quickly deliver the substation to remote and undeveloped areas with a harsh climate.



The construction of the housing is made of sandwich panels with installed equipment of full factory readiness.
The module has small dimensions, which allows it to be transported by any type of transport on public roads.
The sleigh is made in the form of a rigid power metal frame, which ensures reliable and safe movement of the PTS over rough terrain.

MODULAR TRANSFORMER SUBSTATION (MTS) 35 - 110 KV

An effective solution in the construction of substations is the use of modular transformer substations. Unlike permanent substations, the equipment of MTS are factory installed in block modules, which ensures the compactness of the location of the substation itself at the Customer's site.

Reducing the size of the land plot, the volume of construction work and, as a result, reducing the Customer's resources for construction in general - this is the number of advantages that make it possible to give preference to modular substations.



Haier Laundry Machine RUS LLC
MSS Haier 110/10 kV
Modular substations (MS) 110/10 kV 2x25 MVA

ADVANTAGES



Full factory readiness



Modular manufacturing and delivery principle



Reduced commissioning time

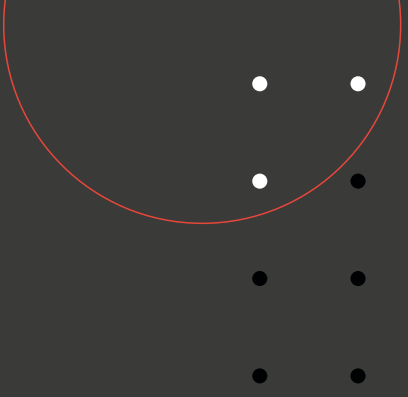


Reducing the size of the land



more about MS

MODULAR TRANSFORMER SUBSTATION (MTS) 35/10 KV



The modular manufacturing principle makes it possible to reduce the size of the land plot and the volume of construction work on the construction site for the installation of a substation.

The convenience of using MTS is the possibility of increasing power by installing additional modules, connecting them to parallel operation.



Untygeyskoye oil field
Modular transformer substation
(MTS) 35/10 kV 6,3 MVA





Modular packaged transformer substations (MPTS) 35/6 kV
PJSC Rosseti Lenenergo SS 35 kV Osinovaya Roshcha, Saint Petersburg



Closed switchgear (CS) 35/6,3 kV
PJSC RUSHYDRO Vekhnabalkarskaya small-scale HPP, Kabardino Balkaria



Closed switchgear (CS) 35 & 10 kV, General substation control point (GSCP)
PJSC Rosseti Lenenergo SS 35 kV Buhta, Saint Petersburg



Indoor switchgear 10 & 35 kV, General substation control point (DSCP)
IDGC of the North-West, PJSC Vologdaenergo - SS Molochnoe



Closed switchgear (CS) 10 & 35 kV
PJSC Rosseti Lenenergo SS 110 kV Krylovskaya, Saint Petersburg



35/10 kV Modular Substation (MS)
JSC RN-Nyaganneftegaz



35/10 kV Modular Substation (MS)
Russian Railways (RZD) site facility



20 MVA 35/10 kV Modular Substation (MS)
PJSC Rosseti Lenenergo 35 kV Pesochnaya Substation, Saint Petersburg



Modular packaged transformer substations (MPTS) 35/6 kV
PJSC Rosseti Lenenergo SS 35 kV Olgino, Saint Petersburg

PACKAGED TRANSFORMER SUBSTATION (PTS) 35 KV

PJSC Rosseti Lenenergo
SS Ekspoforum
Modular packaged transformer substations
(MPTS) 10/0,4 kV



more about PTS

PTS are intended for reception, transformation and distribution of electrical energy of three-phase alternative current with a frequency of 50 Hz in grids with an insulated neutral.

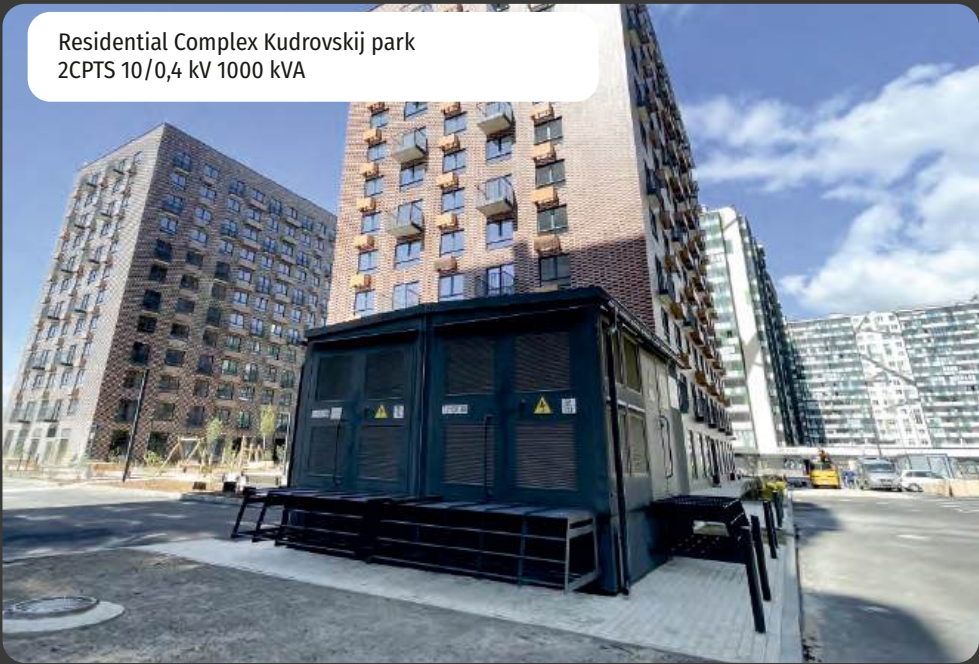
PTS consists of one or more modules, that form a single structure after installation, inside which all the necessary equipment is mounted.

PTSS are delivered fully assembled or in separate units, packaged for transportation and prepared for installation at the customer's facility.



The Sredne-Nevisky Shipbuilding Plant
Packaged Transformer Substation
(PTS) 10/0,4 kV 1600 kVA

CONCRETE PACKAGED TRANSFORMER SUBSTATIONS (CPTS)



CPTS are installed in dense urban areas to create a power distribution network.

The design of the CPTS unit provides protection of electrical equipment from external influences and the necessary strength characteristics during transportation and long-term operation of the substation.

The customers of this equipment are power grid organizations, representatives of the construction business, including the civil and industrial sectors, as well as various city municipal institutions.

-  Full factory readiness
-  Wide range of dimensions

MODULAR PACKAGED DISTRIBUTION TRANSFORMER SUBSTATION (MPDTS)



MPDTS is designed for the distribution of three-phase alternating current with a voltage of 6-10 kV and a frequency of 50 Hz in power supply systems of industrial, housing-and-municipal and public facilities, oil and gas enterprises, as well as individual development zones.

-  Modular manufacturing and delivery principle
-  Service life is over 30 years

SMALL-SIZED CONCRETE TRANSFORMER SUBSTATION (SCTS)



The small-sized SCTS for a voltage of 6 (10, 20)/0.4 kV is designed to receive electrical energy and distribute it to consumers.

The equipment is used in the power supply systems of city, municipal, housing-and-municipal and industrial facilities, individual development areas and cottage settlements, gas stations and public roads.

-  The possibility of using any color solutions



more about CPTS



2CCTS 10/0,4 kV 1250 kVA
Residential Complex CDS Severnyj, Murino



2CCTS & 2MPDTS 10/0,4 kV 100-630 kVA
High-speed highway M-11 Moscow - Saint Petersburg



2CCTS 10/0,4 kV 1600 kVA
Residential Complex Kvartal Che, Saint Petersburg



2CCTS 10/0,4 kV 1250 kVA
Residential Complex Aviator, Murino



2CCTS 10/0,4 kV 1250 и 1600 kVA
Residential Complex Moj mir, Murino



2MPDTS 10/0,4 kV 1000 kVA
Residential Complex Solnechnyj gorod, Saint Petersburg



4MPDTS 10/0,4 kV 1250 kVA
Residential Complex Rennassans, Saint Petersburg



2CCDS 10 kV, 2TS 10 kV 10 MVA
Groupmmc, Saint Petersburg



2MPDTS 10/0,4 kV 2500 kVA
Coal Terminal LLC Vysotsky Port, Vyssok

MODULAR STRUCTURES

PREFAB MODULAR BUILDING

One of the modern processes of a quick economical construction is prefab modular building. The main advantage of this solution is the possibility of assembling a building or a complex in a short time, as well as the possibility of multiple relocations from one place to another, what is due to the maximum factory readiness of the modular units.

It is possible to install any life support systems and all kinds of technological equipment in buildings.
Prefab modular buildings are widely used in various industry branches, but they are most in demand at oil and gas production objects and construction sites, where the erection of capital buildings and structures is not rational.

PJSC Rosseti Lenenergo» ILDN
Closed switchgear (CS) 10 & 35 kV



more about prefabricated enclosures



PREFABRICATED BUILDINGS

Prefabricated buildings made of metal structures gain more and more popularity in modern construction due to the design solutions and the used materials peculiarities. Construction of prefabricated buildings is an advanced technology allowing to minimize as high as possible the time needed for the facility commissioning deadline along with minimum financial costs.

The main purpose of the buildings is to place and protect equipment against external climatic factors. At the present moment, this type of construction has already proven to be reliable, durable and cost-effective solutions in industry, commercial and agricultural construction.



Prefabricated buildings for GIS 110 kV



more about prefabricated
buildings

CONTAINER STORAGE UNIT



LLS Smart Properti
Mobile mining farm



more about container
storage units

Container storage units are the optimal solution for placing various electro-technical and technological equipment at the facility.
Containers require minimum time and material costs, do not require a special foundation erection, can be placed in harsh climatic conditions and protect the equipment from various external factors.



PJSC «Rosseti Lenenergo» Central storage
«Yuzhniye Power Grid Branch»
Mobile container transformer substation
(MCTS) 10(6) kV 630 kVA

SINGLE-END SERVICE ASSEMBLED CHAMBER (SSAC)



The single-end service assembled chambers (SSAC) are designed for operation in electrical installations of three-phase alternating current with a frequency of 50 Hz and a voltage of 6 and 10 kV.

From SSAC, switchgears are assembled that serve to receive and distribute electricity from urban power grids, civilian facilities, agriculture, oil refineries and drilling rigs.



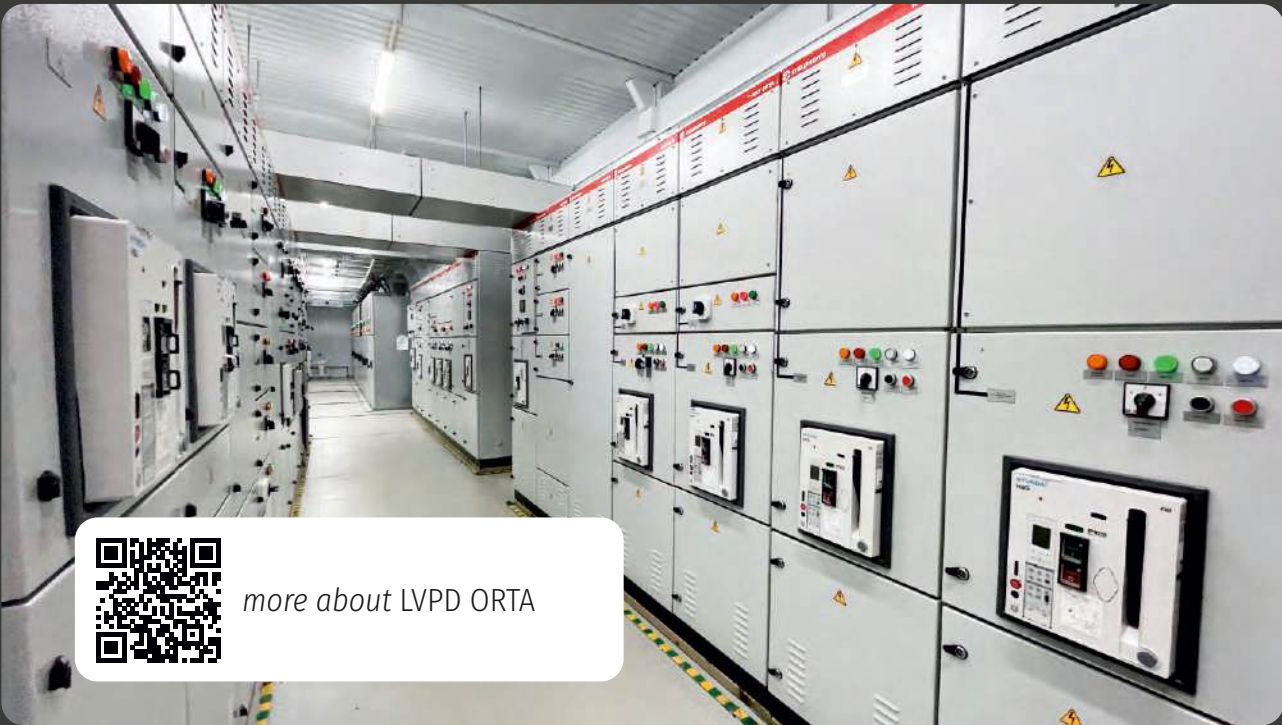
LOW VOLTAGE COMPLETE DEVICES (LVPD) ORTA



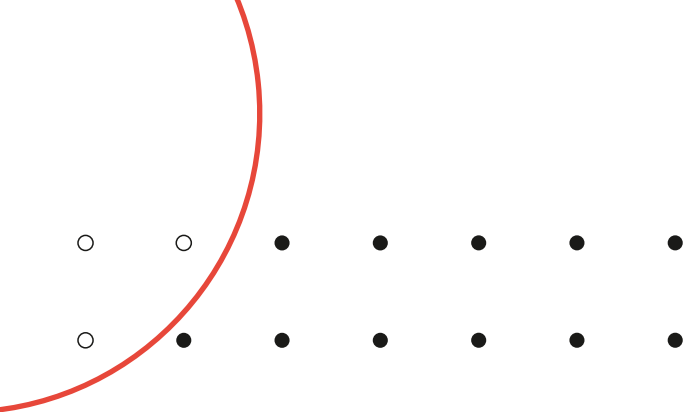
LVPD ORTA is a low-voltage complete device in a metal sheath with air insulation designed for receiving and distributing three-phase AC electric power with a frequency of 50 Hz and a voltage up to 1 kV; for protecting against overloads and short circuit currents, as well as for reactive power compensation, control, measurement, and signaling.

Main advantages

- rated currents of up to 6,300 A;
- internal partitioning of compartments as per the State Standard GOST R 51321.1, including 3b and 4b;
- protection level up to IP 54 inclusively;
- the use of withdrawable modules allows to perform maintenance operations on LVPD elements without turning off the voltage;
- the possibility of integrating the equipment into top-level telemechanics systems.



more about LVPD ORTA



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