

## COMPACT SUBSTATION



### GENERAL INFORMATION

The substation is a compact enclosure consisting of medium voltage switchgear, a transformer, and a low voltage switchboard located in three separate compartments which are segregated from each other using partitions in order to ensure personnel safety. Accessibility to operate or maintain the equipment is through lockable doors provided for each compartment to maximize security. The assembly of the complete substation is factory-ready to minimize site installation time and cost. **Compact substations are used for energy transformation in secondary distribution network from medium voltage to low voltage or the opposite situation.**

### TYPES of COMPACT SUBSTATIONS

- Metal Compact Substation
- Concrete Compact Substation
- Underground Compact Substation
- Mobile Compact Substation
- Prefabricated Compact Substation

### APPLICATION

#### General Application Areas

- Transformer Centers
- Distribution Lines
- Industrial Areas
- Wind Power Plants
- Hospitals
- Power Generation Plants
- Petroleum, Chemicals, Iron and Steel Enterprises

#### Special Application Areas

- Water Pump Stations
- GSM Lines
- Generator Cabins
- Compensation Plants

### ADVANTAGES

- Reduced work and maintenance costs
- Quick and easy assembly
- Long lasting
- The structure is compatible with the environment (Different colour options)
- High safety
- Resistant to climatic conditions

## Metal Compact Substations



Metal Compact Substations is transformer and distribution centers made of galvanized and painted sheet in desired dimensions for various application results. Metal Compact Substations (transformer centers) that can be used provide medium voltage - low voltage (MV / LV) distribution center solution solutions for electricity distribution administrations.

## Concrete Compact Substations

Concrete Transformer Substations are compact, environmentally friendly, aesthetic, and reliable centers designed to isolate medium voltage switchgear, transformers, and low voltage panels from harsh environmental conditions. Concrete Transformer Substations are produced in different colours and sizes in accordance with customer requirements. These substations are used, in general, in the secondary distribution systems at 12 kV, 24 kV and 36 kV voltage levels for equipment such as Air and Gas Insulated Switchgear, Distribution Transformers, and LV Panels which has granted its documentations and reliability from internationally accredited laboratories.



## Underground Compact Substations



Compact underground substations offer a special solution for facilities and metropolitan areas that have a lack of space. Designed to be used in general distribution networks with operating voltages up to 36 kV, underground transformer substations include compact and modular RMUs, low voltage (LV) panel and distribution transformer.

## Prefabricated Compact Substations

The prefabricated compact substation is one kind of compact complete set of distribution equipment which designed combining medium voltage switchgear, low voltage switchgear, distribution transformer, energy metering devices and reactive power compensation devices into one or several boxes according to a Customer's Certain Wiring Scheme (SLD). It is suitable for three-phase AC systems with a rated voltage of 10KV - 36KV for line and distribution of electrical energy. Prefabricated compact substations are suitable for residential quarters, urban public utilities and construction power supplies etc., users can select compact transformers according to different conditions of use and load levels. The protection degree reached IP55, so it could be installed outdoor by occupying the small area.



## Mobile Compact Substations

Mobile compact substation is the most recent high and medium voltage switchgear solution, which combines current technologies and equipment. The main feature of this substation is mobility. It is composed of generating equipment, low and medium voltage solutions all integrated and incorporated into a container specifically prepared for this purpose. Full exterior customization is also possible in accordance with the customer's specifications and image. Mobile substations are formed by mounting all the switchgear devices that must be in a substation on a trailer of sufficient size. These trailers are transported by a vehicle of suitable capacity.

