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Thermally Insulated Substations Metal Frame Enclosure HEJA





HEJA thermally insulated substations are constructed of rigid steel elements and designed for use as power distribution points in industrial applications as well as substations in the power grid. The housing typically contains medium and low voltage switchgear, an internal power supply, telemetry equipment and a power transformer. This rugged solution provides the grid operator with a high level of operational reliability and safety. Each substation is designed to match the application specific requirements.

ADVANTAGES

- prefabricated and tested at the manufacturing location
- accessible and maintainable from the inside
- thermally insulated
- easy to install, use and maintain
- lightweight construction
- for use in diverse applications

CONSTRUCTION

The building frame is composed of steel support elements that are painted with a corrosion-resistive coating. Mounted in the supporting wall frames are steel panels that contain fiberglass insulation. The roof is also insulated and coated with corrosion and ultraviolet resistant paint. A system of gutters provides for the channeling away of rain water. The roof is removable, thus allowing for maintenance from above. The exterior doors are made of galvanized steel and are also insulated; all hinges, locks and other hardware are rust resistant. A door stopper is an optional feature. The substation housing is mounted on top of modular concrete bases with fixed dimensions (3350 x 2100 x 800 mm); this standardization results in cost savings as well as quick installation. In special cases, the enclosure can be placed on a custom-designed concrete base that is poured onsite by a contractor.



TRANSPORT AND INSTALLATION

The enclosure is equipped with loops for lifting and can be moved with the equipment inside. Should the transformer already be installed, please contact the manufacturer for consultation. The type of concrete base and the method of mounting should also follow installation guidelines. Each substation comes complete with installation and user manuals.

TESTS AND STANDARDS

The substation enclosure has been designed according to the European directive: HD 637 S1:2002 High current installations with a rated voltage of over 1 kV.

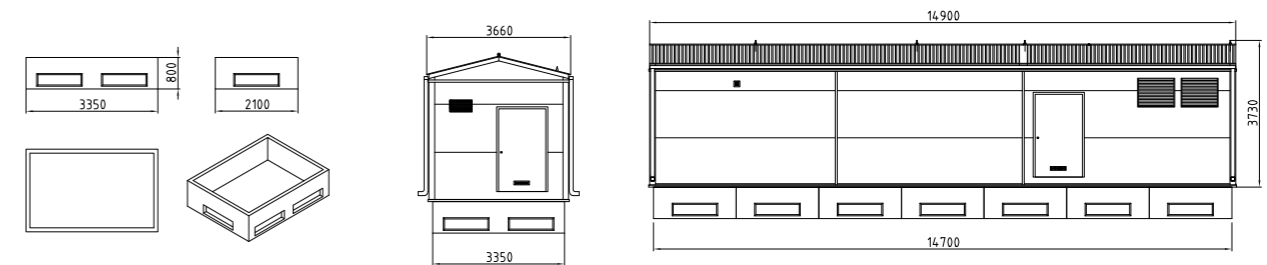
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Power distribution substation with metal frame structure



General specifications

Ambient temperature:	from -25°C to +40°C
Height above sea level:	up to 1,000 m
Environmental classification:	2
Typical color:	grey (others available upon request)
Ventilation:	both active and passive available
Enclosure protection level:	IP23D (higher levels also available)
Resistance to fire:	TP-2



Standard module dimensions

Width:	3.5 m
Length:	4.4 m (6.5; 8.6; 10.7; 12.8 m, ...)
Height:	according to equipment
Insulated wall thickness:	100 mm

EQUIPMENT

- The following medium voltage switchgear equipment types are typically used: NEX, SM6, RM6, SIMOSEC and 8BT1. Other kinds of equipment are also possible (e.g., metering cabinets, modular ring main units, telemetry-controlled as well as motorized equipment).
- Low voltage equipment with diverse configurations up to a rated current of 4000 A can be used in output feeders with fuses and circuit breakers. Additional options are available such as metering capability, street lighting functionalities and reactive power compensation.
- Transformers up to 2500 kVA, oil insulated or dry, available with oil collection bases for environmental protection.

