

Packaged & Modular Electrical Substation



Integrated systems from Bit to kiloVolt



A RELIABLE PARTNER FOR PACKAGED ELECTRICAL SUBSTATION

Costruzioni Elettrotecniche Cear srl has been operating as a **System Integrator** in the electrotechnical and Automation field for over thirty years, offering “Integrated systems from bit to kiloVolt”.

The flexibility at the service of customers is since 1980 the key to success that pushed our technicians to support customers as partners and achieve set objectives in timeframes and costs defined by the project.

The company’s technical solutions have evolved in step with the needs of its customers, to offer a complete range of products and services, **from feasibility studies to the design and construction of:**

- **Transformer And Electrical Distribution Substations**
- **Complete Industrial Automation Systems**
- **Low and Medium Voltage switchgears**

An international vocation, contact with key industrial sectors, and a constant striving for innovation, while maintaining high quality standards and safety, rapidly led the company to be certified in line with the international **ISO 9001 standard**, ensuring top quality production processes and, above all, high levels of customer satisfaction.

A COMPLETE END-TO-END SOLUTION

In the frame of a natural evolution of a know-how consolidated with infrastructure to industrial field, Cear has launched in the market an Engineered version of its Containerized Substations: **the Package & Modular Electrical Substation.**

The P&M Substation is an electrical room of variable dimension usually installed in industrial plants, in Onshore or Offshore location: a pre-fabricated room with installed inside power distribution and Control System devices and technological Systems. Every **P&M substation** is the result of a customized job developed by a team of Electrical, process and Mechanical Engineer that starting from feasibility study realize the engineering, manufacturing, and testing of a turnkey product, ready to be installed in a **plug-and-play solution.**



THE P&M ELECTRICAL SUBSTATION

The Substation generally is manufactured in steel profile and corrugated sheets completely welded, endowed of certified insulation spread also to doors and openings for fire resistance when needed and IP degree to satisfy any harsh environmental condition from very high to very low temperature, or marine application.

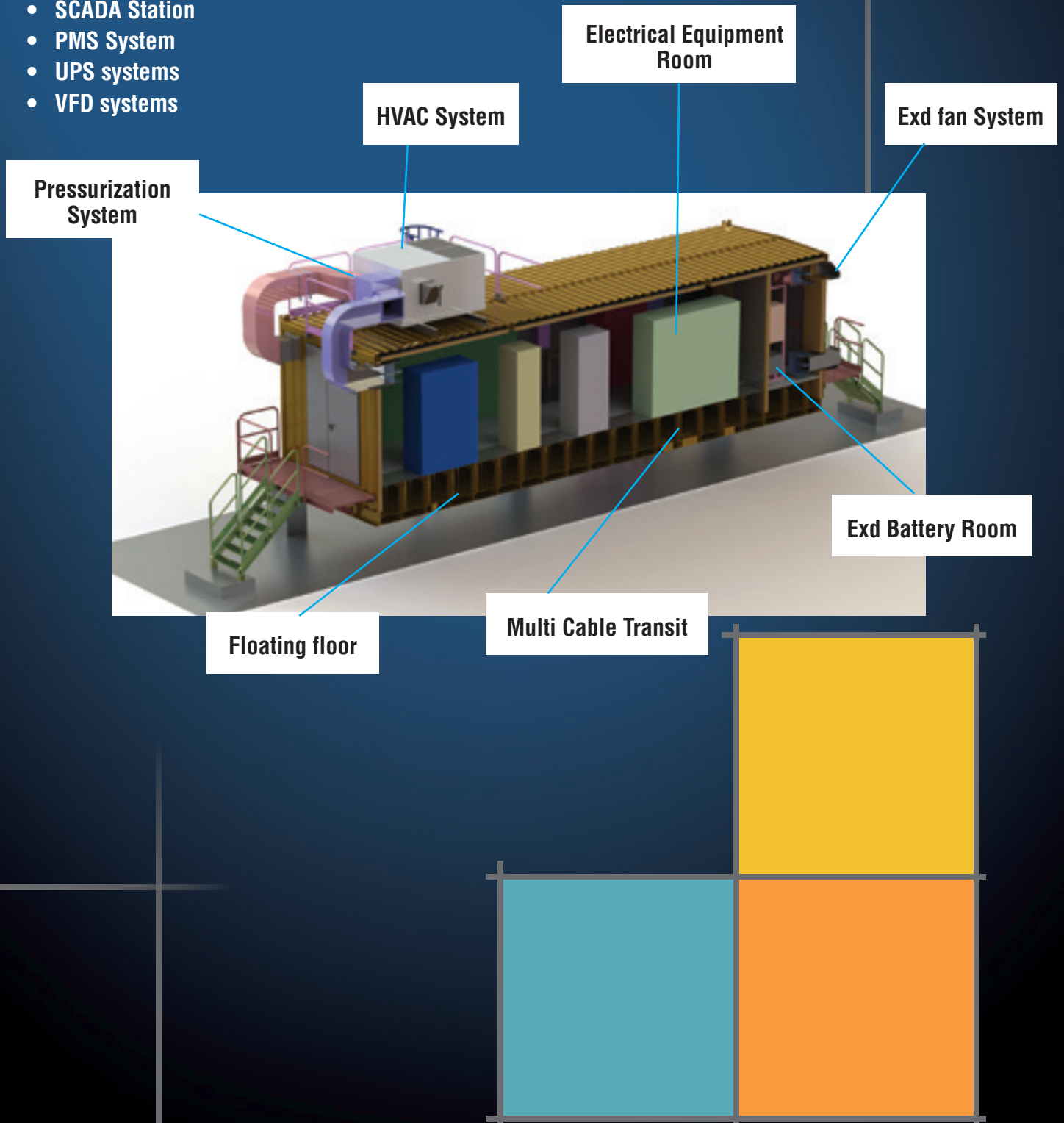
- All systems are completely engineered, produced and tested (in accordance with QA protocols) by CEAR, in order to meet all customer requirements and to save time and costs during erection and commissioning
- **Installation onshore and offshore** (Fixed platforms, Jack-up drilling rigs, Drillship, Spar Platforms)
- Design for installation **in safe and hazardous area zone 1-2** with a certification Ex p, if requested
- **Blast proof resistance structure** can be provided, to respond to criteria for different zones of the plant
- Dimensions and equipment shall be designed in order to respect the customer specification
- **Modularity** of the cabins to allow an easy transportation on site
- **Special coating and insulation** as per environmental application



THE ELECTRICAL EQUIPMENTS

The heart of the P&M electrical substation is in safe hands as Cear can guarantees the performance of the electrical and associated systems fully designed, manufactured and tested in its workshop according to International Electrical standards:

- MV switchgears up to 36kV
- LV switchgears: Power Center, MCC Motor Control Center
- Power Transformers up to 6MVA
- LV auxiliary panels
- Explosion proof control panels
- PLC Control Panels
- SCADA Station
- PMS System
- UPS systems
- VFD systems



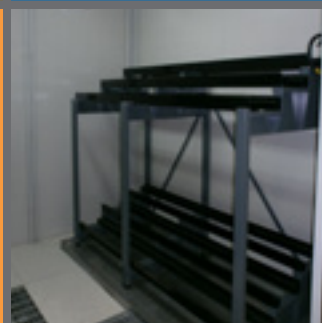
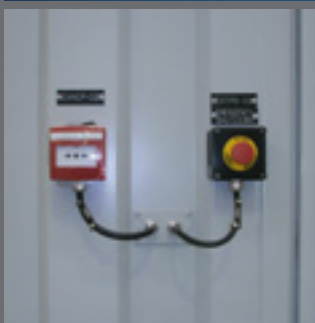
THE TECHNOLOGICAL SYSTEMS

The Technological Systems, designed in standard or Explosion proof Execution, complete the substation:

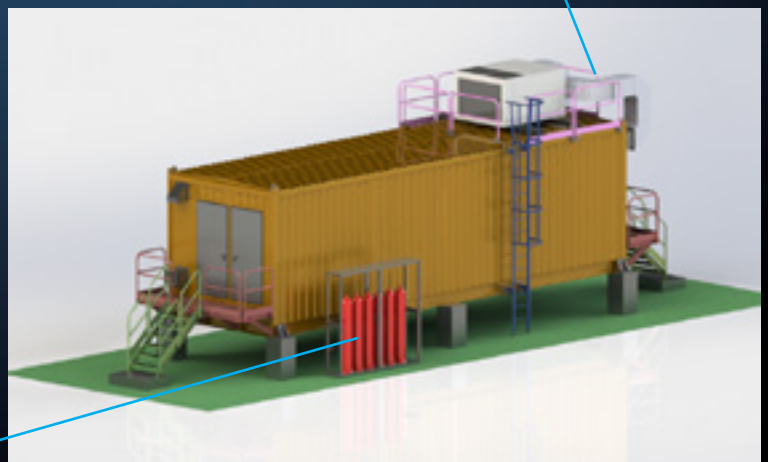
- HVAC system
- Pressurization and Air filtration systems
- F&G system:
- ESD system
- Auxiliary systems
- Security, IT and TELECOMS devices
- Exd Electrical System for Battery room

SPECIAL & AUXILIARY EQUIPMENTS

- Blast and fire resistant doors
- Insulated, fire and Blast resistant walls, also in Jet fire application
- Multi cable transit (MCT)
- Floating floor
- Safety Emergency Equipment
- Technical documentation: operating manual and maintenance



HVAC Air distribution ducts



F&G System

DIFFERENT APPLICATION, A SIMPLE SOLUTION

One of the advantages of The P&M electrical substation is the possibility to save costs and time of installation as it is a **plug-and-play solution**:

- Rapid connection to the grid: It enables to energize without request for building permits, both for temporary facilities and permanent plants
- Completely tested in our Workshop before delivery
- Manpower reduction for the installation on site
- Assurance of the same safety performances of prefabricated concrete cabins

This Modular building solution can meet various applications:

- Power transformer substation
- Process automation and controls
- Pipeline power feeding, communication and control
- Local Equipment Room (L.E.R.)
- Package E&I and MCC room
- Rotating equipment housing



QUALITY, KNOW-HOW AND DEDICATED SERVICES

Cear's commitment to continuous improvement is aimed at providing safe products and high quality services. We have been certified in line with the ISO 9001 standard since 1998, serving as a constant incentive to improve production processes.

Compliance with International Standards

Cear has experience in dealing with local country regulation and with the following Standards:

Electrical Systems: IEC-BS-ANSI

Hazardous area: ATEX and NEC

Cabins: DIN - DNV- SOLAS- IMO -RINA - CSC

Services we offer are:

Project design in 3D

Integrated Electrical, Process and Mechanical Engineering

Installation and interconnection of all equipment

Logistics and transportation planning and management

F.A.T., Commissioning and Start up activities

Training

Post sales Service and maintenance





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**COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =**

