

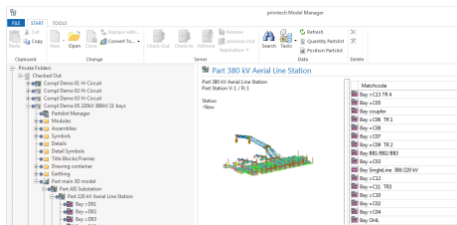
# primtech – Solution for Optimized Substation Design of High Voltage Substations



primtech is an engineering software for the design, construction and documentation of substations (air-insulated switchgear). High-voltage equipment, substructures, cable ducts, wires, tubes, clamps, roads and fences can be easily selected from a comprehensive library and placed as intelligent 3D objects on a voltage-dependent grid.

## Project Management

The project manager ensures that all data is managed transparently and structured according to the corresponding voltage-levels and bays.



## Concurrent Engineering

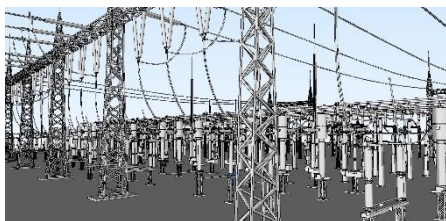
Synchronous processing of project files is optimally supported by mapping of the substation structure and the Check In / Out technology.

## Data Replication

primtech provides the possibility simultaneously work on the same project across different locations, either regionally or worldwide.

## Substation Standards

primtech guarantees data reuse by managing standard bays or completely typified part stations.



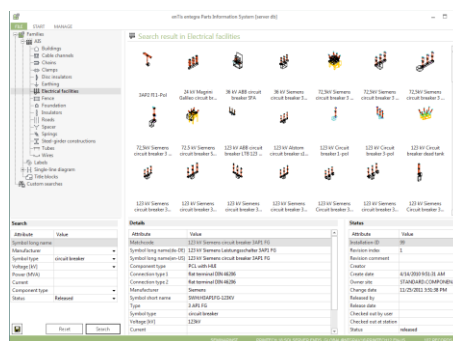
## Large Substations

Large substations with different voltage-levels, more than 30 bays and thousands of components can be handled transparently and efficiently within primtech.

## CAD Component Library

The freely extendable library manages 2D and 3D CAD models and their component data for BOM generation. The library contains about 3000 high voltage components, such as:

- Circuit breakers
- Transformers
- Disconnectors
- Insulators, chains
- Wires and tubes
- Clamps
- ....



## ERP Interface

The CAD and ERP data remain always consistent and up-to-date due to the integrated ERP-interface.

## CAD Functionality

The graphic editor of primtech is AutoCAD. Taking advantage of intelligent primtech objects the construction of an outdoor switchgear can be realized with just a few mouse clicks.

- Wire connections and the corresponding clamps, chains and sags
- Tube connections
- Cable ducts, conduits
- Earthing grid
- Streets, paths and fences
- Lightning protection rods and wires
- Steel construction
- Buildings, building services engineering

## Calculation Tools

primtech has powerful integrated calculation tools:

- Lightning Protection Calculation - rolling sphere method (IEC 62305-1 / IEEE 998)
- Phase Checker
- Clearance Calculation
- Sag Calculation
- Short-Circuit Current - Calculation of Effects (IEC 60865-1:2011 / IEEE 605)
- ....



# primtech – Solution for Optimized Substation Design of High Voltage Substations



The automatic generation of BOMs and CAD drawings relieve the designer of routine tasks, shorten project run times and avoid errors. primtech supports the designer throughout all project phases and improves quality and consistency of the entire workflow.

## Evaluations

primtech provides not only different calculation results but also freely configurable parts lists / BOMs.

## Quantity BOM

The BOM can be generated very fast - with thousands of components. It is possible to define filters according to the type of component, e.g. special BOMs for clamps and cables etc.

## Structure BOM

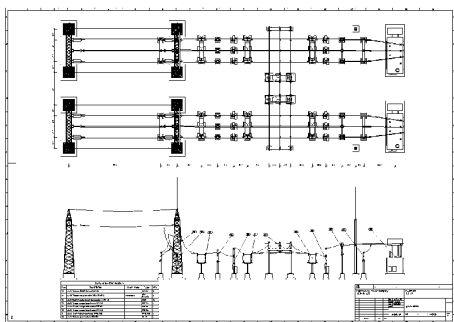
The BOM of the structure includes information on where the individual component is installed in the substation.

## Itemized BOM

Thanks to the consequent numbering of all parts in the substation, you can manage the entire substation consistently.

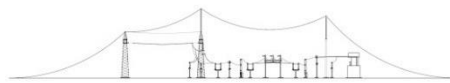
## CAD Drawings and Plans

primtech provides the comfortable creation of different views and sections at the push of a button.



## Different Types of Plans

The designer can easily and freely configure his preferred plan type.



The most important types are already predefined, e.g.

- Layout
- Earthing
- Clamps
- Foundation
- Lightning protection
- ....

## CAD / CAE Data Exchange

As data exchange is very important in the planning process, primtech provides functions for all common scenarios.

## 2D Export / 3D Export

The integrated 2D export tool allows the export of the 3D substation model to high-quality 2D AutoCAD files. primtech provides export to standard formats, such as:

- DXF, DGN
- PDF, TIFF

primtech also provides a function to export a 3D AutoCAD model.

## Substation BIM

primtech is the solution for substation BIM (Building Information Modeling).

- Integration with Navisworks
- BIM 3D - Design within an intelligent, parametric 3D model
- BIM 4D, 5D....

*“primtech will allow us to open new markets, to market new clients and to expand the level of service that we are able to give our existing clients”*

Mathew White, Senior Designer  
Del-Mont Consultants,  
Colorado, USA

*“We are working with primtech - we are in advantage over our competitors”*

José María Noguero, AEE Power,  
Spain

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