esaPRO Electrical Design

Electrical Solutions

The ESAPRO modules dedicated to electrical designers

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MAKE YOUR PLANT DESIGN EASY

ESAPRO Electrical Design

Electrical Design is a family of software products dedicated to the 3D design of cable trays in industrial environments. With these applications, it is possible to model **cable trays** and **conduits**, design **supports**, and calculate **cable routing**.

ESAPRO CABLE TRAYS

ESAPRO Cable Trays is your ally in **3D cable tray** design. Model **cable trays** and electrical **conduits** with precision, generate **material lists**, check for **interferences**, and create **detailed 2D drawings**, optimizing your project.

ESAPRO CABLE ROUTING

ESAPRO Cable Routing is an add-on for ESAPRO Cable Trays that optimizes **cable paths** in the 3D plant. Define cable types, utilities, and routes, obtaining detailed **lists of lengths** and **paths**, and automatically verify the **fill percentage** of sections.

The main features

Product Description:

ESAPRO Cable Trays is the ideal solution for designing and managing cable trays in a 3D environment. This advanced software, part of the ESAPRO suite, allows precise modeling of cable trays and conduits, ensuring accurate graphical representation and optimal layout management of the plant.

Main Features:

1. Three-Dimensional Modeling of Cable Trays and Conduits: With ESAPRO Cable Trays, it is possible to model both primary and secondary cable trays, including elements such as rectangular trays, conduit pipes, and junction boxes. The software uses parametric graphic functions to generate the 3D model by acquiring dimensional data from the project database.

2. Customizable Dimensional Catalog: With an extensive database of components, ESAPRO Cable Trays offers a complete library of straight elements, elbows, tees, reducers, and other parametric components. The module automatically counts the joints needed for connections and provides multilingual descriptions for each part.

3. Steel Structure Modeling: In addition to electrical raceways modeling, ESAPRO Cable Trays includes functions for the quick and precise creation of accessory steel structures. It is possible to create beams, racks, columns, squares, and more, with the software providing the computation of various profiles and the total weight of the structure.

4. Material List Management: Once the drawing is complete, ESAPRO Cable Trays can automatically generate material lists for tray components, conduits, steel structures. The lists can be printed directly or exported in formats compatible with other software for further processing.

5. Electrical Cable Tray Supports Modeling: ESAPRO Cable Trays offers the ability to model cable tray supports using a customizable component catalog. Once the supports are modeled, it is possible to get a material list and 2D construction drawings complete with dimensions, material tables, and related tagging.

6. Integration with Multi-User Database: The software is integrated with the ESAPRO Process & Plant Design environment, sharing a single project database based on Microsoft SQL Server. This allows for an efficient workflow and seamless collaboration within the design team.

7. Automatic 2D Drawings and Rendering: ESAPRO Cable Trays includes tools for generating automatic detailed 2D drawings, as well as photorealistic rendering for impactful presentations. The drawings can be exported as 2D DWG files for easy sharing and collaboration.

8. Maximum Compatibility with External Software: All files produced with ESAPRO Cable Trays are 100% pure AutoCAD dwg files, ensuring seamless interoperability with other design tools.

With ESAPRO Cable Trays, cable tray design becomes an efficient and precise process, allowing you to optimize the plant layout and ensure optimal resource management.

ESAPRO
CABLE ROUTING

The main features

Product Description:

ESAPRO Cable Routing is an add-on designed to optimize cable routing in electrical plants, integrated with ESAPRO Cable Trays. It allows for both automatic and manual routing, ensuring precision and efficiency in design.

Main Features:

1. Automatic and Manual Routing: The software offers the ability to automatically route cables, saving time and reducing errors. Alternatively, a manual option is available for more direct control.

2. Constraint Management: During routing, the software considers various constraints such as compatibility with other cables, and available space, ensuring optimal paths.

3. Input and Definition: The module allows you to define cable and route types, as well as specify the electrical utilities of the plant in detail, ensuring a customized and precise design.

4. Detailed Reporting: At the end of the routing process, the software generates complete reports, including total meters per cable type, individual cable lengths, and detailed route lists, facilitating project documentation and management.

5. Integration with SPAC Automation: The "SPAC Link" function allows seamless integration with SPAC Automation software, facilitating data exchange and updated material counts, ensuring consistency between functional and executive design.

ESAPRO Cable Routing is the ideal tool to optimize the cable routing process, ensuring precise and comprehensive electrical plant design, reducing design time and costs.