

# Special purpose machines - highly standardized Engineering with WSCAD



**HOSOKAWA  
ALPINE**

*Hosokawa Alpine AG from Augsburg is consistently pushing ahead with standardization in its electrical design. This saves a lot of time, increases the efficiency of processes and increases the quality of products. The two prerequisites for standardization are a modular well structured product portfolio and an appropriate electrical CAD software.*

Powders, granules or bulk solids - we encounter them every day in all walks of life. From soya to barley, tablets or coatings for the automotive industry - the precursors for such products are often crushed by plants that come from Augsburg. For more than 110 years, Hosokawa Alpine, which is based in Augsburg, has been

supplying high-quality machines and systems for a variety of in-house recycling tasks and the processing of powders, granules and bulk solids. 700 employees develop and manufacture with great expertise.

Their worldwide customers, with different requirements from all branches of the process industry, demand a lot from the engineering teams at Hosokawa Alpine. Depending on the consistency, intended use or manufacturing process of the various end products, they have to tailor the machines exactly to the needs of the customer. All components of the modern mills and classifiers have to work seamlessly together, from engineering down to manufacturing. State-of-the-art automation and visualization guarantee high process stability and easy operation. The electrical engineers at Hosokawa Alpine use the electrical CAD solution from WSCAD to design the required documentation and the design of the control cabinets.



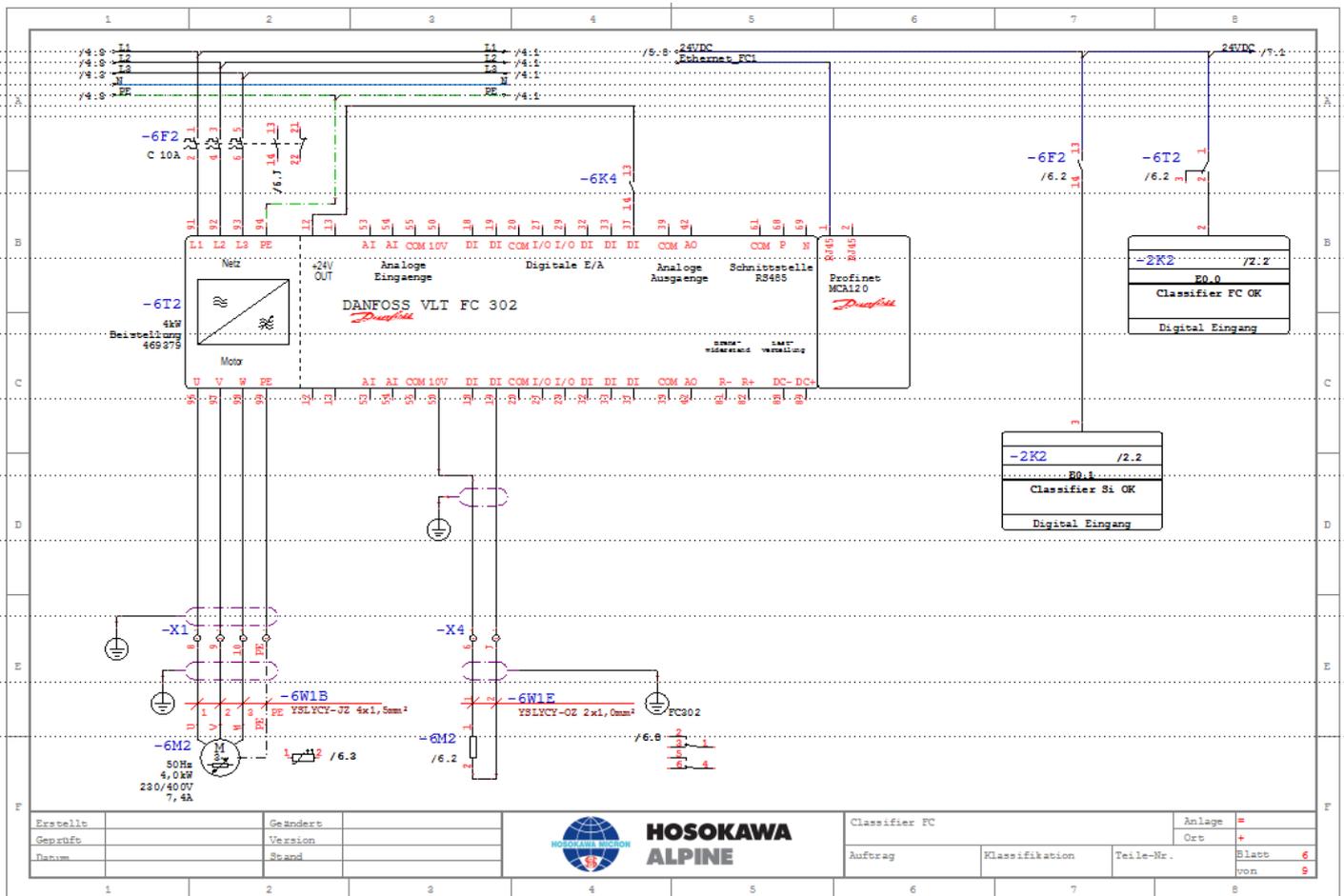
*Powders, granules or bulk solids - many of the starting materials for day-to-day life products are crushed by high-quality machines coming from Hosokawa Alpine based in Augsburg. For example jet milling through interparticle collisions within the gas jets with the Fluidized Bed Opposed Jet Mill AFG.*

## **Company-wide standards lead to high efficiency**

The electrical engineer Christian Ziegler and his colleagues design the required electrical standards in order to be able to develop consistently throughout the company at high quality.

**Success Story**

**WSCAD**  
ELECTRICAL ENGINEERING



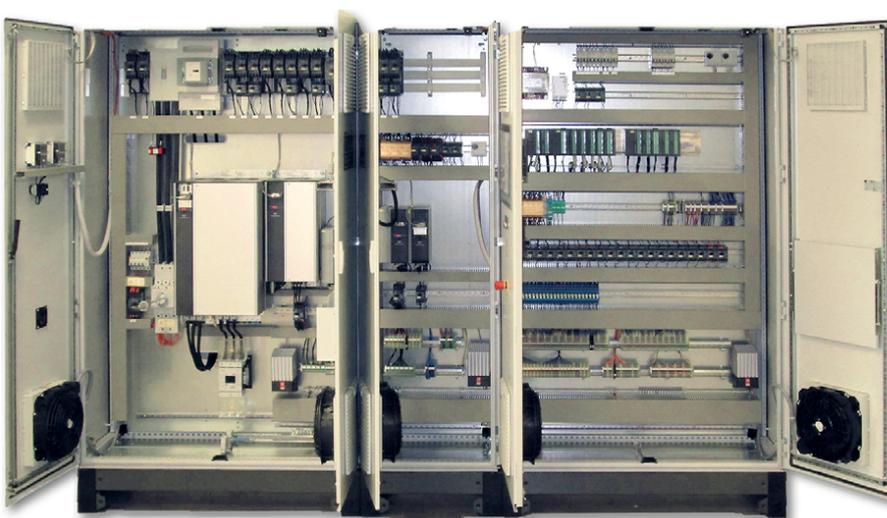
Hosokawa automatically generates electrical documentation using the Electrical Engineering module of the WSCAD SUITE in conjunction with the Project Wizard.

This includes basic work for the PLC controls as well as the design of schematics: defining parts, drawing symbols, creating macros and variants and making them available in libraries. "This way our schematics are structured identically across all engineering disciplines and all departments. And our employees work

more efficiently", says Christian Ziegler, while underlining the advantages of company-wide standards. "The same applies to the final commissioning at the customer: the software and control cabinets of the different machines are built according to the same concept and are easy to understand."

*"By creating enterprise wide macro libraries we make sure that our schematics are structured identically in all departments. This way our employees work more efficiently."*

The current symbols and parts data for the company's own database are downloaded from wscaduniverse.com, the world's largest electrical CAD library. It has parts and symbols in WSCAD and Eplan\* format. The portal has currently 1.2 million parts from 170 manufacturers. The standardized use of materials leads to larger quantities and this enables purchasing to negotiate better terms and conditions. The link between WSCAD and ERP systems is provided via the PLM/ERPSync interface. The bill of material generated in WSCAD contains all relevant information. This removes manual work (copying and pasting) or searching for order numbers, etc. No manual transmissions, no search for order numbers, and rarely any questions for the engineers.



The standardization team at Hosokawa provides a WSCAD design kit to their engineering colleagues. The kit has been continually enhanced. Engineers don't have to design symbols, macros and their variants. They just

The electrical plan for this control cabinet was created by drag-and-drop in the WSCAD Project Wizard.

Den größten Teil ihrer Schaltpläne generieren die Entwickler und Konstrukteure bei Hosokawa Alpine schnell über eine Tabelle in dem Add-on Project Wizard für die E-CAD-Software WSCAD.

have to pick them from the online database. New additions include the so-called sets, with the help of which schematics can now be generated for the most part at the touch of a button.

### Faster with the Project Wizard

In order to efficiently use the standardized library, engineers are working with WSCAD Project Wizard. With this small Add-On to the WSCAD SUITE, a complete motor control system, for example, including frequency converters, cables and fuse protection can be easily integrated into the schematics. It only takes a few clicks. For this purpose predefined sets are integrated into the Project Wizard. A set consists of several macros, which in turn, are composed of different symbols and variants. Depending on the design - for example, the power rating of the drive - all the required electrical components with the appropriate parts are now stored in the variants. By combining multiple sets, the entire schematic is created at the touch of a button. This is fast and

ensures that all schematics are consistently structured and standardized. Only little or no rework is required. The change of sets can occur from a central location, and is updated immediately for all engineers. *“This way, we can further increase our standards and degree of automation. Our engineers can design schematics faster and in better quality”*, says Christian Ziegler, while appreciating the new possibilities with the Project Wizard. *“The slightly higher overhead initially is well worth the effort. **After just a few months we are already working about 20 percent***

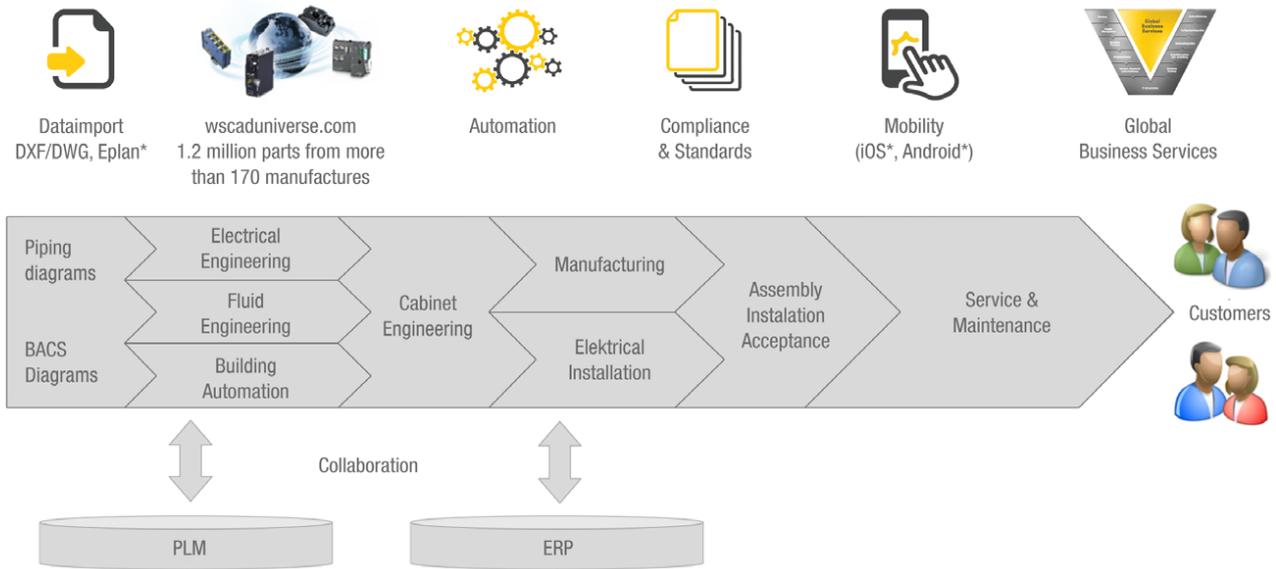
*„We appreciate the new possibilities with the Project Wizard by combining multiple sets of macros to create the entire schematic at the touch of a button. This is fast and also ensures that all schematics are uniformly structured. Little or no rework is required. This way we can increase our standardization even further as well as our degree of automation.*

***faster than before.** And we have just begun.”*

To ensure that all colleagues know which sets are available, there are clearly described libraries, which also contain the structure of a schematic. The suitable sets and macros can be conveniently dragged from the central library and dropped into a project table. For example, a complete drive train can be designed and documented in a single step. Christian Ziegler adds: *“This is valuable time that we can now invest in the individual design of each machine and in new projects.”* Hosokawa Alpine is thus successfully supplying special machines of consistently high quality, which result from an extraordinarily efficient product development process.

*„The slightly higher overhead initially is well worth the effort. After just a few months we are now already working about 20 percent faster than before. And we are only at the beginning. This is valuable time that we can now invest in the individual design of each machine and in new projects.“*

## An electrical CAD platform for all non-mechanical engineering tasks



With the electrical engineering solution from WSCAD, engineers and designers can efficiently complete all their „non-mechanical“ design tasks with just one software product and on a single platform. From electrical engineering and cabinet engineering, through process and fluid technology, all the way down to building automation and electrical installation. The replacement of a valve in the fluid plan, for example, is immediately visible in all schemat-

ics of the other engineering disciplines. This saves time and improves the quality of the results.

All symbols and parts data are located in a central database which, in turn, enables cross-disciplinary work without data breaches, misunderstandings and inconveniences. It works in small or large projects, with multi-lingual capabilities and sophisticated user rights or even in teams with international projects.

Working with parent structure identifiers, importing data from other electrical CAD systems, reliable PLM/ERP integration and proven methods to automate engineering tasks are likewise part of the WSCAD solution. It comes with various options for the maintenance contract and excellent support.

WSCAD GmbH, headquartered in Bergkirchen near Munich, offers fast and reliable electrical CAD solutions with an outstanding price-performance ratio for the entire electrical engineering design and documentation. The WSCAD SUITE is modular and scalable. It provides users from the fields of electrical engineering, cabinet engineering, P&ID, fluid technology, building automation and electrical installation with an integrated set of all the tools required for designing machines, plants and buildings.

Standardization, reuse, and automation significantly accelerate engineering and design time, while also ensuring higher quality. With over 1.2 million parts from more than 170 manufacturers, wscaduniverse.com is by far the largest electrical CAD data library of symbols and manufactured parts on the market and the only one that supports both WSCAD and Eplan\* users alike. It also offers 3D CAD data. The use and provision of data is free for users and the manufacturers of parts and equipment. Additional services from the WSCAD Global Business Services such as Engineering and Migration Checkup, workflow integration, consulting, training on the digitizing and importing of paper documentation and third-party electrical CAD formats round off the product range.

WSCAD is part of the Buhl group, Germany, an owner-managed software group with more than 700 employees. The staff at the Bergkirchen and Würselen sites as well as an international dealer network serve 35,000 customers from all over the world.

*\* This brand is owned by third parties that have no association with WSCAD GmbH*

Article published in the  
magazin, IEE, Hüthig Verlag,  
issue #3, May 2017  
Author: Thomas Walker  
www.walkerbretting.com

WSCAD GmbH  
Dieselstraße 4  
85232 Bergkirchen

Tel.: +49 (0) 8131 3627-98  
Fax: +49 (0) 8131 3627-50

E-Mail: info@wscad.com  
www.wscad.com