



SUCCESS STORY

**PROFESSIONAL CAD PACKAGE PRODUCING
ERROR-FREE ELECTRICAL DESIGN DRAWINGS**

WS CAD
ELECTRICAL ENGINEERING

At a glance:

Customer

- Wickman Group Ltd, Coventry, UK
- OEM Machine tool design and manufacturing company
- 45 employees
- £7 million plus UK turnover
- Subsidiaries in USA, Brazil, China & India

Situation

- Custom designed and highly personalised machines require an off-the-shelf Electrical CAD solution – cost effective, powerful and easy to use

Used software

- WSCAD SUITE
 - Electrical Engineering
 - Cabinet Engineering Advanced

Benefits

- Integrated design tool with cross-referencing and cross-checking connections
- Continuous engineering using one platform
- Excellent price-performance ratio
- Faster with fewer errors

WSCAD SUITE CUTS TIME NEEDED TO PRODUCE ERROR-FREE ELECTRICAL DESIGN DRAWINGS

“ We have been so impressed that we wouldn't go back to our old systems.”

Established in 1925, Coventry-based Wickman has earned a reputation worldwide as a designer, supplier and manufacturer of high-quality turning machines, specialising in multi-spindle lathes that are controlled by CNC, servo or PLC.

The company's lathes are capable of producing medium and large volumes of extremely precise, high quality components ranging in diameter from 5mm to 82mm. Because the multi-spindle lathes can work on up to eight bars at a time, they can produce components in 15 to 20 per cent of the time required by a single-spindle machine.

Operating out of offices in the UK, Brazil, USA, China and India, Wickman has few competitors in the global multi-spindle lathes sec-

tor and leads the market serving a variety of key industries. These include automotive (especially fuel injection), aerospace, defence, oil and gas, agriculture, hydraulics, white goods and electronics. Components produced for these markets include hose end fittings, termination glands for industrial cables, projectiles and cartridges, bearing housings and rings for use in electric motors and much more. Competitively priced, Wickman's machines operate at the top end of their respective markets, offering customers the ability to achieve production runs of up to one million components.

With a turnover approaching £8m, Wickman employs 40 staff in the UK and is part of a larger group of companies with over 1500 workers. Other entities include a machine rebuilding company in India and a sales and service support facility in Wisconsin, USA. Not content with dominating markets in the west, the company is looking to develop its multi-spindle lathes customer base in China and Asia.

Wickman's machines typically have a working lifespan of 40 or 50 years, making aftercare and service important elements of what the company offers. This includes providing spares for machines that it manufactured many decades ago



While 20 per cent of the Wickman machines sent out from Coventry are custom-designed, it is still rare for two standard machines to leave the factory with identical configurations.

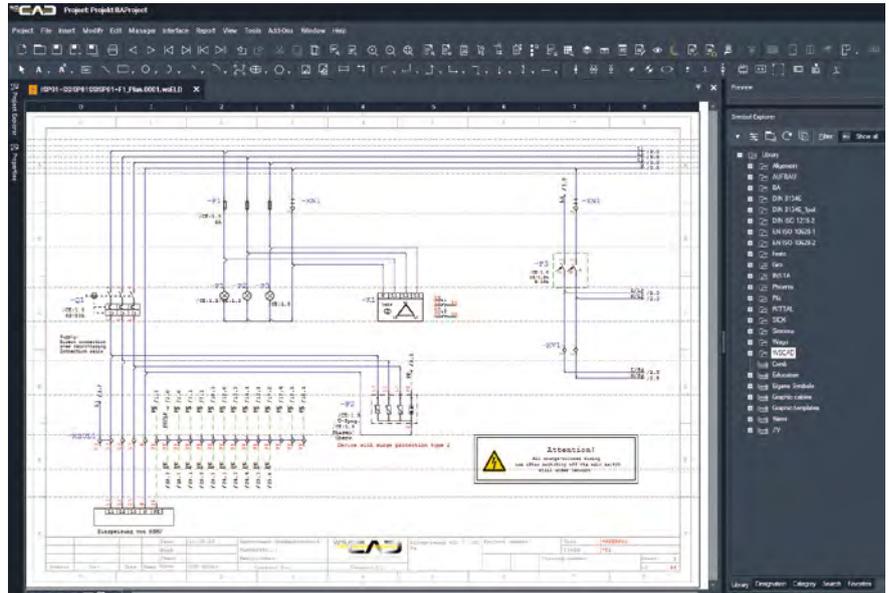
as well as a comprehensive upgrading service to reconfigure existing machines with the latest technology. Key elements include adding CNC capabilities to them and upgrading their AC motor drives. While 20 per cent of the machines sent out from Coventry are custom-designed, it is still rare for two standard machines to leave the factory with identical configurations.

This level of personalisation required the company to use an off-the-shelf CAD package for producing electrical drawings relating to how the newly fitted spindle motors and drives will operate. However, the CAD system used tended to be more like a 2D drafting aid than a design tool. There was no way of cross-referencing or cross-checking connections on electrical drawings but more comprehensive CAD systems that offered these options were prohibitively expensive.

Keen to improve the turnaround times of its machines, Wickman wanted a CAD package that was not only cost-effective and powerful but also easy to use. After an extensive search of the industry, the company found that the best system on the market that met all its requirements was the WSCAD SUITE CAD/CAE package.

Significantly faster than other CAD systems and with an intuitive operator interface, WSCAD proved popular with Wickman's design engineers because it avoided over-complicating the design process. Also, they were able to begin a project, save the work and come back to it at a later date without needing

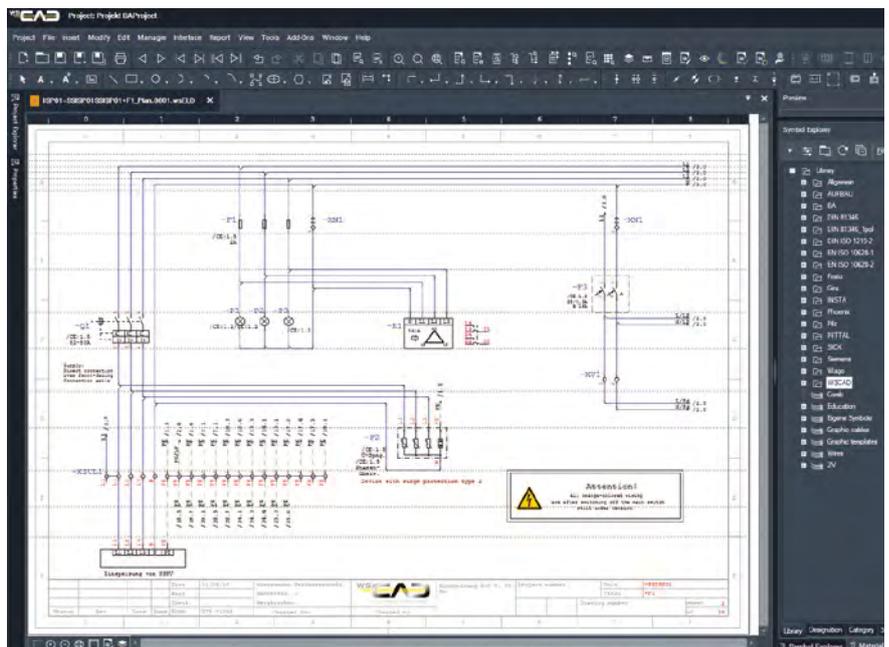
Routing, calculation of wire lengths, filling degree of the cable channels are available on your fingertips when it comes down to the control cabinet layouts. Generated data are used for labeling and manufacturing of wires and cabinet enclosures on NC machines at no additional costs.



Macros and macro variants significantly speed up the creation of electrical schematics with the Electrical Engineering discipline from the WSCAD SUITE. Cabinet construction with Cabinet Engineering follows seamlessly; schematics from other electrical CAD systems can also be imported.

to 're-learn' what they had been doing. Other benefits included the elimination of human error and the ability to achieve greater accuracy levels than was previously possible, improving the consistency of drawings. The company's designers appreciated working with a system that was designed-for-purpose rather than using one that needed to be 'shoe-horned' into an application.

Clive Thorne, Control & Electrical Engineering Manager at Wickman Coventry, has been so impressed with WSCAD that he wouldn't want to go back to the company's previous CAD systems. "Ease of use was an extremely important factor when selecting a CAD system," Clive says. "We have one person using the system for 20 per cent of their time and we didn't want something that



The costfree Cabinet Augmented Reality App allows engineers to mark connections via mobile devices as soon as they have been wired and save the latest version. Maintenance engineers scan components and have immediate access to the latest plans including DD tags, 3D-views of components, full parts data and original manufacturer's data sheets.

would require a week-long training exercise. With WSCAD, basic training can be completed very quickly and there is no steep learning curve which means that everything is done much faster.”

Clive adds: “Every machine we work on has a unique set of electrical drawings issued and they are created at the rate of one every month. However, most of the work involves reconfiguring existing components which means that often only minor changes are required. The WSCAD Software helps us operate within much shorter timeframes by making it easy to modify existing drawings and copy data in from one drawing to another. At the same time, we are also able to send drawings out to customers that contain all the information required rather than having to put ‘if fitted’ next to an optional feature, such as a tool break detector.”

One of the most impressive aspects of the WSCAD system for Wickman



” Ease of use and an excellent functionality-for-price ratio were extremely important factors when selecting a CAD system. With WSCAD, basic training can be completed very quickly and there is no need to spend thousands of pounds on a sophisticated CAD system.”

was its excellent functionality-for-price ratio. Just as the company felt it was impractical to spend many thousands of pounds on a sophisticated CAD system and thousands more on training, it believed that the costly add-on features offered by some alternative CAD systems pro-

viders represented a level of “over-kill” for a company of Wickman’s size which focuses almost exclusively on electrical engineering. Other benefits for Wickman include the ability to integrate the WSCAD solution with other electrical CAD applications and IT systems, all backed

by the “excellent” technical support from WSCAD that Clive Thorne describes as “beyond expectations”.

Wickman’s designers are among 35,000 users who have chosen the WSCAD SUITE as their preferred electrical CAD solution. They value the system’s structuring, standardisation, reuse and automation capabilities, which can be managed alongside WSCAD’s augmented reality app. Additionally, WSCAD’s integrated suitability for electrical engineering, cabinet engineering, process and fluid technology, building automation and electrical in-



Wickman's designers are among 35,000 users worldwide who have chosen the WSCAD SUITE as their preferred CAD solution to speed up electrical engineering tasks within the design and production process of extremely precise, high quality machines.

stallation is also highly valued. This allows any changes made to a component in one discipline to be reflected and completed immediately in all the other disciplines. Not only do these features reduce engineering time from several weeks to just

a few hours (or even minutes) but they also ensure operators achieve a much higher quality of work.

WSCAD is backed by the world's largest electrical parts library wscaduniverse.com which saves

designers time by removing the need to create their own symbols and parts. The library contains over 1.4 million data sets from over 330 manufacturers that can be accessed free of charge.

WSCAD is part of the Buhl group with more than 700 employees. WSCAD has been developing electrical CAD solutions since three decades. Customers include medium-sized companies, international corporations and engineering service providers. More than 35,000 users rely on WSCAD SUITE as their electrical CAD solution. The software is based on one core platform that covers six engineering disciplines: Electrical Engineering, Cabinet Engineering, Piping and Instrumentation, Fluid Engineering, Building Automation and Electrical Installation. Any change made to a component in one discipline immediately reflects in all the other disciplines. WSCAD methodologies for standardization, reuse and automation significantly reduce engineering time from several weeks to just a few hours or even minutes. At the same time, these practices also ensure a much higher quality of work.

wscaduniverse.com is by far the largest electrical CAD data library on the market offering over 1.4 million parts from more than 300 manufacturers. It is the only digital library that supports both WSCAD and Eplan* users alike as well as 3D CAD data. Use and provision is free of charge for all users and manufacturers of parts and equipment. Maintenance engineers and service personnel are now able to scan devices and components within a control cabinet by using the WSCAD Cabinet AR App on their smartphones or tablets. This provides them instant access to the schematics, device tags, part data, 3D views and even the original data sheets from the manufacturers.

The WSCAD portfolio is completed by eleven seamlessly integrated service offerings from WSCAD Global Business Services such as: engineering and migration checkups, consulting and training, digitization of paper documents and conversion of third-party electrical CAD formats.

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