

DRC
USES

EPLAN to help streamline design for OEMs

Reducing costs, timeline for design

Design Ready Controls (DRC), Inc. operates as a strategic partner with OEMs to achieve a dramatic reduction in time to market, an increase in design and manufacturing consistency, meaningful cost savings as well as competitive advantages for manufacturers. DRC's expertise encompasses knowledge of the best available component technology, OEM market niches, state-of-the-art design tools and best manufacturing processes. This is complemented by a highly advanced application of EPLAN Electric P8 as electrical design software.

“Original equipment manufacturers, or OEMs, want the productivity benefits that come with the most advanced design automation concepts; but many, especially small- and mid-sized companies, can't support that level of expertise in-house. Enter the original design manufacturer, or ODM, like Design Ready Controls, Inc. of Minneapolis, that operates as an extension of OEMs in designing and manufacturing control panels. By engaging DRC, Valent Air Management Systems, a Minneapolis-based maker of custom ventilation and refrigeration solutions, gains access to DRC's specialized knowledge and tools, which leverage the full potential of EPLAN Electric P8.”

ePLAN your **engineering**

Engineering supplier

delivers improved

PRODUCTIVITY

“We stored circuit information in the EPLAN macros, saving thousands of lines of code and many months of development and debugging,” says Dipesh Karki.



Automating design tasks

With client Valent Air Management, DRC enters at the early design stages of a planned product family launch so it can assimilate Valent’s design requirements. DRC developed the latest version of its proprietary Automated Panel Expert (APE) configuration software to work in collaboration with CAE software like its EPLAN Electric P8 system to configure and automate design tasks so that they are specific for the industry involved.

DRC’s use of APE allows Valent to accelerate defining of product specifications. Operating within APE, Valent’s marketing and engineering experts can choose from a list of design-ready options that is web-based, interactive and customizable. By selecting from this expandable list of options, Valent can adapt more quickly to general market requirements for a new, unique product family.

Saving months of development, debugging with macros

Building the product options at DRC was facilitated by EPLAN’s engineering macros. “With the EPLAN advanced storage capabilities, we didn’t have to program each individual aspect of a circuit such as wire gauge and protection sizing,” says Dipesh Karki, senior programmer/software architect. “Previous generations of the APE took many months of programming to create the engineering documentation required to build and wire the panels.”

Defining product family

DRC’s design-ready process generates a general estimate of costs, helping Valent define and validate all necessary marketing requirements and engineering criteria. That, in turn, allows Valent to bring a highly variable product family to market in less time and for less cost than would otherwise be possible.

But the real power of the process is realized when orders start rolling in. OEMs with highly variable product families typically employ a manual ETO (Engineer To Order) process. When an order is received, it goes first to an engineer who designs a unique, “custom” piece of equipment and corresponding controls based on the options selected. Once the drawings are finalized and the schematics approved, the layouts go to manufacturing.



ePLAN[®]
electric P8

QUALITY

engineering with
EPLAN Electric P8

Drawings for just-in-time manufacturing

As order volumes increase, this manual process often becomes a bottleneck. DRC overcomes these bottlenecks by using APE to drive the advanced design functions of EPLAN Electric P8 to automatically generate the drawings for “just-in-time” manufacturing of control panels and associated wiring harnesses. Mitchell DeJong, director of research and development notes: “Through APE system engineering rules and EPLAN macro libraries the entire ETO process is automated.” The system anticipates and processes component selection, part sizing and functional requirements automatically.

Automating ETO slashes turnaround time

The APE, utilizing EPLAN’s flexible Application Programming Interface (API) extension, is able to electronically digest an order and feed EPLAN Electric P8 a complete set of design instructions for each unique panel. With this instruction set and by employing its own placeholder object and macro variant technology, EPLAN Electric P8 is able to pick, place and size the necessary devices, component parts and wires into a complete set of schematics and layouts.

APE plus EPLAN equals much faster time-to-production

EPLAN is subsequently used to diagnose the drawings for accuracy and generate manufacturing reports like interactive PDF schematics and BOMs linked directly to ERP. This automation reduces order turnaround time – often from weeks to minutes – adds integrity to the engineering of panels and feeds all necessary information to the manufacturing site.

EPLAN makes DRC role a success

“EPLAN Electric P8 provides DRC with a powerful software solution that can handle large amounts of variability and is used to greatly benefit Valent’s production system,” says DRC president Troy Schmidtke, adding: “The DRC mission is to provide high quality engineering, panel and harness solutions that help our customers meet their strategic objectives. Our EPLAN software is a big part of how we make that mission a success.”

“By coupling DRC’s extremely advanced APE system for ETO with EPLAN Electric P8, DRC is able to minimize the setup time required to bring a system online,” says David Gardeen, DRC’s director of sales and marketing.



EPLAN Electric P8

Making smart solutions smarter for OEMs

SUMMARY

Original design manufacturer Design Ready Controls (DRC), Inc. provides its OEM clients like Valent Air Management systems with an advanced design and engineer-to-order capabilities that allow it to bring a highly variable family of products to market and into manufacturing faster and with less cost. By having its own APE software drive EPLAN Electric P8, DRC accelerates the design of product specifications and order fulfillment by automating and verifying the generation of documentation like bills of materials linked to the OEM's ERP system as well as manufacturing reports like interactive PDF schematics.

Find out more about DRC on www.designreadycontrols.com

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Published in 2009

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