

# CONTROL BOX LTD.

## STREAMLINING CONTROL BOX DESIGN WITH SOLIDWORKS ELECTRICAL



Control Box relies on SOLIDWORKS Electrical Professional software to develop high quality electrical system schematics as well as design electrical panels and control systems in 3D.

**Challenge:**

Streamline the development of electrical control boxes, panels, and systems to better collaborate with mechanical OEM partners in the development of municipal and industrial water and wastewater control systems.

**Solution:**

Add SOLIDWORKS Electrical Professional electrical design software to its existing SOLIDWORKS Premium mechanical design and analysis software implementation.

**Benefits:**

- Cut electrical design time by 10 to 20 percent
- Improved quality with 3D schematics
- Increased accuracy of panel fits
- Eliminated rework and retrofits

Control Box Ltd. specializes in the design, development, and implementation of industrial electrical, process control, industrial information technology (IT), and process monitoring systems. The New Zealand-based electrical engineering and manufacturing firm handles projects ranging from a single component to turnkey, integrated electrical and control systems to support entire factories.

Comprising a team of experienced electrical engineers and industrial electricians, Control Box has built a reputation for understanding the complexities of any project and delivering effective solutions. The company collaborates with original equipment manufacturers (OEMs), and other electrical engineering firms seek out Control Box to take advantage of its industry-leading expertise.

Because the company's success stems from its technical knowledge, Control Box is committed to leveraging advanced design and manufacturing technologies to develop its systems. This is why Control Box implemented SOLIDWORKS® Premium mechanical design software in 2011, and then added SOLIDWORKS Electrical Professional electrical design software in 2012, according to Director Tim Corbin.

"We acquired SOLIDWORKS Premium software to streamline the design of our housings and integrate more easily with our mechanical OEM partners," Corbin recalls. "Initially, we used a combination of AutoCAD® Electrical and Microsoft® Visio® software to diagram our electrical schematics. When SOLIDWORKS Electrical software became available, we immediately switched over to take advantage of a more integrated solution."

Control Box chose SOLIDWORKS Electrical Professional software because it's easy to use, integrates completely inside SOLIDWORKS mechanical design software, and outputs a single bill of materials (BOM) for both mechanical and electrical components. "Modeling our panels and electrical systems separately didn't make sense," Corbin explains. "In addition to the efficiencies provided by integrating our schematics and mechanical design packages, SOLIDWORKS Electrical allows us to model our electrical panels in 3D.

"We've used SOLIDWORKS Premium mechanical design software quite heavily," Corbin adds. "We were so impressed with the SOLIDWORKS mechanical design package, that we believed integrating electrical design into an all-in-one 3D package would provide additional benefits, which it has."

**FASTER DESIGN AND BETTER COLLABORATION**

Since implementing SOLIDWORKS Electrical Professional software, Control Box has not only shortened electrical design time—while simultaneously outputting higher quality schematics—but has also helped customers and partners save time. "The addition of SOLIDWORKS Electrical software streamlines our process," Corbin stresses. "Our process is faster—SOLIDWORKS Electrical saves 10 to 20 percent of our time—and we produce really good, professional-looking schematics.



**"SOLIDWORKS Electrical is really good for making design changes because it quickly and automatically updates the 3D schematics whenever you make a change."**

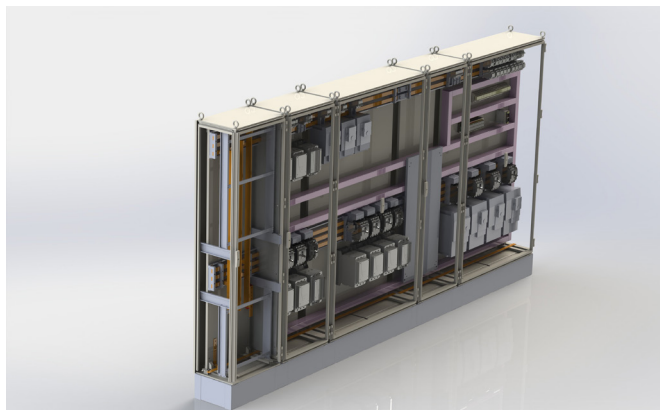
— Tim Corbin, Director

"The beauty of SOLIDWORKS Electrical software is that we can develop the entire panel in 3D, adding in 3D models of all the components and accessories, which are available for download online," Corbin continues. "In addition to saving us time, SOLIDWORKS Electrical software is helping our customers and partners become more efficient. They can import our 3D models directly into their designs—even if they're modeled in different formats—and because 3D is more accurate, they can move ahead with tasks, such as pre-drilling bracket holes, which helps speed time-to-market."

## INCREASED ACCURACY PRODUCES RIGHT-SIZED PANELS

The greater accuracy afforded by SOLIDWORKS Electrical 3D software enables Control Box to more consistently respond to customer demand for smaller factory footprints. "Our customers want us to maximize spatial usage with our control panels to both satisfy end user footprint requirements and help them save money by using less material," Corbin explains. "For example, when a machine is made out of aluminum, customers want to use as little material as possible, compressing available space, while ensuring that our panels and all of the electronics fit properly."

"Because we are more accurate, we're sure that all of the PLCs, transformers, the power supply, and other electrical components will fit properly without resorting to the rework and retrofits that we had to do in the past," Corbin notes. "SOLIDWORKS Electrical allows us to right-size our systems."



With SOLIDWORKS Electrical Professional software, Control Box has fully integrated electrical and mechanical design, outputting a single, unified bill of materials (BOM) for its systems and supporting greater collaboration and faster development.





### 3D FACILITATES QUICK DESIGN CHANGES, ENHANCES SALES EFFORT

With SOLIDWORKS Electrical software, Control Box takes advantage of parametrics to make quick, easy design changes. For example, during the development of a wastewater treatment system for a winery in Napa Valley, California, the company's OEM partner frequently added and deleted features, compelling Control Box to do the same. "SOLIDWORKS Electrical is really good for making design changes because it quickly and automatically updates the 3D schematics whenever you make a change," Corbin says.

"SOLIDWORKS Electrical 3D software has also been a great sales tool because we are able to render images of complete systems in 3D," Corbin adds. "There's no doubt that showing a mechanical design in 3D helps us in sales, and the ability to do that for electrical designs really enhances our sales effort."

**Focus on Control Box Ltd.**  
VAR: Intercad, Auckland, NEW ZEALAND

**Headquarters:** 406 Ellison Road  
Hastings 4122  
Hawkes Bay, NEW ZEALAND  
Phone: +646 8769048

**For more information**  
[www.controlbox.co.nz](http://www.controlbox.co.nz)

### Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 190,000 customers of all sizes in all industries in more than 140 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

