OSCO's Complete Guide to Custom Control Panels

OSCO CONTROLS 30TH Anniversary

Complex applications demand sophisticated control solutions.

OSCO applies leading technology, creative thinking, and innovative industry practices to deliver high-quality industrial control panels. We created this eBook to address how OSCO's engineering and design services can address the specialized needs of your project.

Table of Contents

Simplify the Complex with Custom Control Panels

Our goals align – you want to make operations on the facility floor as seamless as possible, and we want to implement a system of control panel designs custom-suited for your specific needs.

Let Us Transform Your Plant Into a "Smart Factory"

Implementing smart technology into your production equipment can create a highly responsive, adaptive, and fully connected system that can lead to greater efficiencies and reduce downtime.

Legacy equipment is made "smart" with the addition of sensors, controls, digital communication, and cloud-based software. OSCO Controls brings innovative technology into your production so that you can become a digitally connected smart factory.

The Benefits of Smart Technology in Your Factory

- Operators can receive live notifications of equipment failure through text or email alerts for faster diagnostic and recovery time through our proprietary cloud-based system, OSCO Connect

- Encourages preventative maintenance with real-time insights into the status of your equipment and the maintenance or repairs needed to extend its life of service.

- Increased transparency of your equipment's condition offers more oversight against the unexpected, allowing it to pick up where it left off.

- IIOT-connected systems collect data, giving operators diagnostic information to help them make long-term improvements, cost efficiencies, and process decisions.

- The information allows users to make quicker decisions, improving processes that can increase productivity.

- By transmitting crucial information through status signal sensors, data is sent to control centers where operators can monitor and adjust operations.

- Improve safety measures with IoT-enabled equipment designed to alert operators to stop machinery and avoid potential danger or worker injury.

- Control systems with smart technology can seamlessly integrate with legacy equipment for more flexibility on the factory floor.

Our Design & Implementation Process

We are committed to understanding your current application demands from beginning to end. This understanding allows us to design the right custom control panel to address your challenges.

No matter the complexity of the systems, we can work with your team to design and build a specialized control panel that fits your unique needs.

Our Design & Implementation Process

Step 1
Discovery

Every project kicks off with a collaborative discussion to define your objectives, application, and environment.

Step 2
Project Quote

Our experts will review the required functionality, electrical requirements, operator interface, and necessary certifications in order to provide you a project quote.

Step 3
Design

When the quote is approved, we begin finalizing the electrical drawings, safety documentation, and gathering all the components necessary to begin building your custom panel.

Step 4
Build

As your project goes into production, it is put into the hands of skilled professionals that meticulously assemble, wire, label, and program each control panel to ensure safety and quality.

Step 5
Test

To exceed our customers' expectations, our controls engineers and technicians ensure all electrical systems are working properly, the operator interface is fully functional, and programming is extensively tested.

Step 6
Continued Support

OSCO offers a variety of ongoing support services for your custom control panel. We provide on-site installation and start up, operator training, support troubleshooting, and ongoing diagnostics for advanced systems.

Successful Industrial Applications of Custom Controls

OSCO offers controls solutions for a variety of industrial applications. While we've worked across numerous industries, our team has expertise in several notable sectors.

Water/Wastewater

Maintaining quality and productivity for water and wastewater process control systems in today's world requires the utmost reliability. Our team of design and engineering professionals will work to help meet the demands of this industry through our customized control capabilities.

Recycling

We will always go above and beyond to help you meet the demands of controlling and monitoring the entire recycling process. Our custom services are unique to each project and guaranteed to perform the desired operations at peak efficiency.

Distribution

OSCO offers customized control panels and interfaces that sync to your project's unique distribution requirements, regardless of scale or complexity. Optimize your distribution equipment or process and maintain cutting-edge control through our superior combination of skill and technology.

Manufacturing

Our team has a long history of delivering custom-engineered control solutions for the manufacturing industry. We understand industrial manufacturers' challenges with demanding production schedules and rugged environments. OSCO offers control solutions to assist with all your production requirements. We apply our expertise, creativity, and the latest tools, techniques, and best practices to solve some of the most challenging problems.

OEMs

Our team has developed control solutions for over 20 years. Over this period, we have strengthened our experience and knowledge of custom product design for the OEM industry. OSCO Controls has the flexibility and capability to address the volume of both small and large customers. We are committed to understanding your unique requirements and applying our decades of experience and advanced technical capabilities to deliver a customized control solution specific to the needs of your project.

Material Handling

OSCO Controls is an independent supplier of customized controls and software for material handling equipment. We can customize control panels and interfaces that conform to your requirements and specifically meet the needs of your project. Our design engineers can collaborate with your facility engineering team to assess the situation and make recommendations for process controls that will improve the life of the equipment, provide safer operations, and execute better performance.
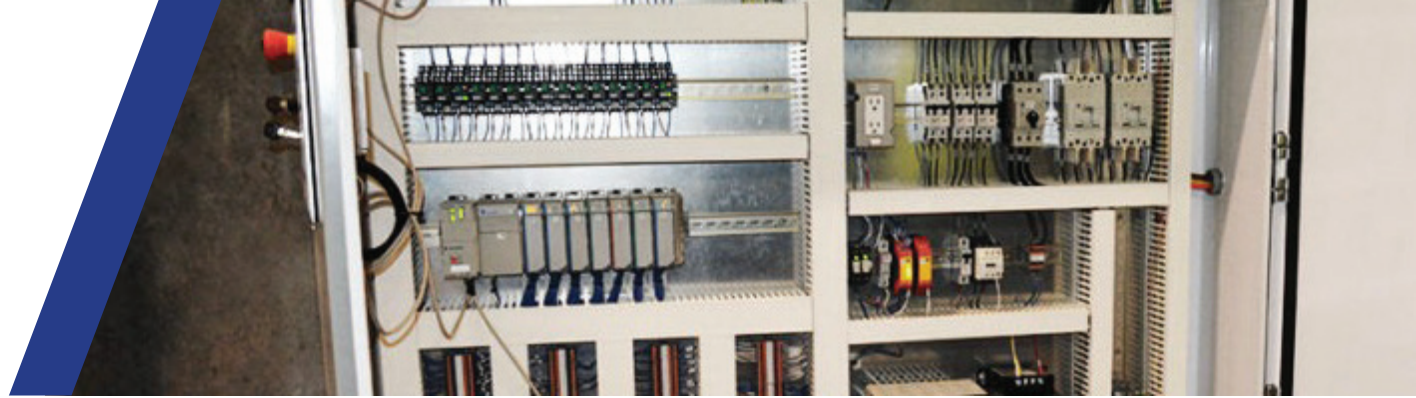
Oil & Gas

OSCO Controls offers the latest advancements in custom controls to help drive process optimization for the oil & gas industry. We understand the needs of the oil and gas market for a broad range of process applications. Our controls are engineered for the harsh environments found in the oil field and are built to meet demanding specifications. We know each environment presents unique challenges, so our control systems are customized to your exact requirements.

Utilities

Our dedicated engineers apply their skills and experience to design a robust, responsive, reliable control system. They will work with you to ensure all aspects of your system implementation run smoothly and deliver superior results. OSCO Controls provides smart technology solutions with real-time monitoring to meet your utility equipment integration needs.

OSCO's Custom Controls Capabilities

We aim to design innovative control solutions, applying our expertise and knowledge to custom-made and state-of-the-art control panels.

Achieving simplicity for any challenging application.

Programming
One of the many assets our team brings to our customers is our level of expertise with PLC, HMIs, and PC-based programming. Our programmers are proficient in all IEC 61131 standard programming languages and have completed many successful projects for a wide variety of industry applications. We have the flexibility to custom program our control panels to deliver the most functional system required of the application.

We use flexible programming methods and coding to produce solutions that fit the overall goal of the end-user. Our programmers use a library of proven code, allowing us to spend more time focusing on process design for your unique application.

Our PLC Software Development Methods

- Ladder Logic

- Structured Text (ST)

- Instruction List

- Function Block (FBD)

- Sequential Function Control (SFC)

9

Automation

OSCO designs, fabricates, and installs controls to automate your manufacturing equipment and processes. We utilize the latest control and automation technology to make your equipment more versatile and productive.

Our knowledgeable engineers have tackled some of the most challenging equipment automation problems. Our experience includes custom automation controls for material handling & conveyor systems, sheet-feeding equipment, freight-elevator solutions, automated drill pipe machining center, and more. OSCO's extensive background will ensure that our automation solutions provide a seamless integration with your equipment to achieve better and faster production levels. We are highly competent in handling every phase of project development and implementation to ensure your complete satisfaction.

Systems Integration

We offer complete control system integrations for OEMs and manufacturing companies seeking a competent partner with vast experience in control technology and on-site support to handle plant-wide connectivity.

OSCO Controls provides the appropriate control system and networking platform to integrate multiple pieces of equipment on your factory floor. We deliver seamless system integration by migrating, operating, and monitoring functions to a single user interface. Our extensive design experience, implementation, and support of integrated control systems allows us to partner with you, achieving the optimal solution for your connected enterprise.

Our Services

- Full Engineering Development
- Control System Manufacturing
- PLC Controls Software & Programming
- Testing & Site Acceptance
- Start-Up

OSCO's System Integration Services

- Control Panel Design and Build
- Hardware and Software Logic Design of New Systems
- Plant-Wide Networking and Communication
- Motion Control, Pneumatic, and Hydraulic Software
- HMI Design
- Data Tracking and Monitoring

Product Development

We use our knowledge of controls technology and design with your first-hand application experience to bring your controls concept to production. OSCO will work as an extension of your team to help you get your product to market.

OSCO Controls has years of experience with challenging applications, including designing and developing control products for OEMs.

We are dedicated to working with OEMs on their conceptual product ideas, and we use innovative approaches to design and build unique control panels based on the requirements.

Cloud-Based Technology

OSCO offers equipment monitoring services through our proprietary cloud-based technology - OSCO Connect. Proactively monitor critical data and equipment performance through our simple yet powerful web-based interface.

We developed our own private cloud-based monitoring platform, recognizing a need for our customers to incorporate smart technology into their operations. Customized dashboards provide real-time information, and alert notifications are sent via text or email in case of equipment failure.

Our highly reliable control panels and our cloud services offer a secure and efficient solution for monitoring your industrial equipment remotely.

We offer full control design & manufacturing services to OEMs.

- Product Concept, Design, and Engineering
- Custom Programming
- Prototyping and Testing
- Manufacturing and Assembly
- Training and Ongoing Support

On-Site Support

As part of our unique business approach, we offer complete on-site services before, during, and after the completion of your project. We pride ourselves on providing the most technical and experienced team on-site, so our customers can count on a successful startup and ongoing productivity.

Our field service engineers have the knowledge and technical skill to troubleshoot and support all our control panels, communications, and PLCs. They are truly wizards at configuring and diagnosing to resolve your issues quickly and efficiently. They will ensure every part of your system works correctly before leaving your site. And, if you should have problems after the initial commissioning, we are available remotely to help you troubleshoot at any time.

Our scope of services

- Training

- Commission and Startup

- Engineering Outsourcing

- Technical Support & Troubleshooting

- Remote Monitoring and Modifications

- Programming & Implementation of New Software

Optimize Controls with OSCO CONNECT

We recognized the importance of smart technology integration and developed our own private cloud-based monitoring platform: OSCO Connect.

This cloud-based monitoring service allows you to monitor critical data and equipment performance through a web-based interface. Its intuitive controls enable administrative access to live data within one convenient interface.

Once integrated, our system will link to your equipment's programmable logic controllers through cellular or Wi-Fi connections from any web browser.

The Benefits of Cloud-Based Monitoring

By upgrading to a cloud-based system like OSCO Connect, site managers can track workplace data and operations remotely.

Connected Capabilities

Discover what sets OSCO Connect apart from other system integrations.

Customize Dashboards

Receive real-time equipment alerts, production updates, condition statuses, & more.

Record & Store Data

Track & review historical performance and operations data for managing supervisors.

Run Preventative Diagnostics

Collects data and patterns over time, implementing proactive measures while in operation.

Troubleshoot Issues

Allows teams to remotely assist customers with their controls without visiting the site location.

Streamline Productivity

Stop problems before they happen with special alerts sent to your email or mobile device.

Working with OSCO Controls

OSCO Controls offers the most technologically advanced and cost-effective controls solutions available. Our focus is to partner with our customers to understand their operational challenges and provide a better control solution that is safe, reliable, and easy to use.

Are you ready to discover your custom-made solution?

Contact us, and one of our qualified OSCO Controls specialists will arrange a time to discuss your project further.

| P: (405) 749-8686 | F: (405) 749-5186 | oscosales@oscocontrols.com |