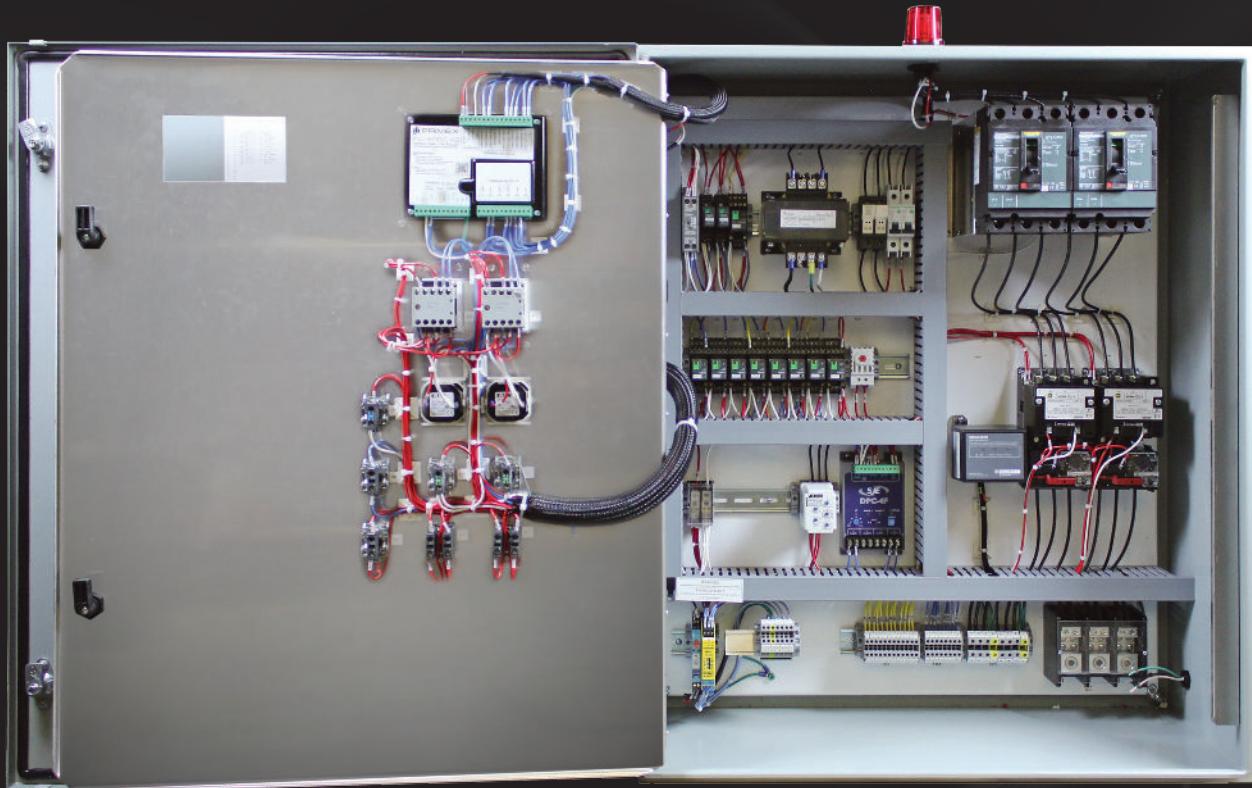




# SJE RHOMBUS®



# Engineered Custom Control Solutions

Our Solutions Put You in Control



# WE MAKE CONTROL PANELS THE BEST PART OF YOUR PROJECT

Control panels might be a small part of your project, but they're our whole world. With over 45 years of experience, SJE Rhombus is one of the most trusted names in the industry. We take your project from concept to completion while providing you with exceptional customer service and competitive pricing. Our panels work so well, you'll forget about them!

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## Why Choose Us?



### FAST QUOTES & DELIVERY

Your customers are asking for a quote yesterday. Our dedicated Sales Engineering team has experience quoting panels of all types and sizes so we can **quickly and accurately** design a panel to meet your needs with industry-leading delivery times.



### EXCEPTIONAL SUPPORT & SERVICE

We pride ourselves on our legendary customer service. Our specialists are ready to be part of your team.



### HIGH QUALITY PRODUCTS

We use the highest quality parts and components. All panels are fully powered up and thoroughly tested before delivery.



### EXPERIENCE YOU CAN TRUST

Our Sales Engineering team quotes thousands of control panels every year, so we've seen it all!

# CUSTOMIZED CONTROL SOLUTIONS

When off-the-shelf control panels will not meet your needs, you can count on our engineering team to understand the project requirements and design a customized control panel solution for your application. We handle all steps of the process: Design, Programming, Assembly, Testing and Commissioning. We have the expertise to provide the perfect custom solution.



## KEY APPLICATIONS

Lift Stations

Constant Pressure Systems

Aeration Controls

Blower Systems

Oil Spotter

Water & Wastewater Treatment



# Engineered Solutions

## LIFT STATIONS

**Problem:** The customer needed a **triplex control panel** to operate three alternating 3HP single phase pumps at 230V for a pumping station at a large campground. Other requirements included: a stainless-steel enclosure; submersible pressure transducer-type level control; and the ability to remotely monitor pump information and alarm conditions.

**Solution:** We designed a control panel that used a combination of our proprietary SJE controllers to meet the unique needs of the application. First, we used our **SJE TPC-X pump controller** for the 4-20 mA submersible pressure transducer level control. Next, we built our **SJE Panel Link™ system** into the pump control panel so the customer can remotely monitor pump information such as run time, events, pump amperage, flows and tank level. The customer is immediately notified in the event of an alarm condition or pump failure.

## CONSTANT PRESSURE SYSTEMS

**Problem:** The customer needed a **duplex panel for a water booster application** using two 460 VAC, 30 HP pumps; pump one is the main pump, with pump two serving as backup. They also needed it to alternate based on time, as pump one ran almost continuously. Therefore, if pump one was not able to keep up, and pressure continued to drop, pump two would turn on. Finally, they needed the controller to shut the pumps down if the water supply tank level got too low.

**Solution:** We provided a control panel with our **SJE VFDC-4100 controller**, which is designed specifically for this application. It is a full-featured controller with all the settings needed for a **constant pressure application** controlling multiple variable frequency drives (VFDs). This allows the pumps to adjust their speeds to the water usage, resulting in the pumps starting and stopping less frequency which will extend the life of the pumps.

## AERATION CONTROLS

**Problem:** The customer needed an aeration control panel that would also **operate a blower and a mixer**. Several timing sequences needed to be considered. The aeration mode needed to be monitored by the level of dissolved oxygen present in the treatment area.

**Solution:** We developed a control panel uniquely suited to the required sequence of operations. The panel logic used a **PLC and HMI for a full user interface**, so the customer had the flexibility for the times needed to **operate the aerator, blower and mixer**. Both the mixer and blower were controlled by VFDs, allowing them to run at a determined rate for maximum motor integrity. Motor data: 230 VAC three phase, 1 HP blower, 5 HP mixer and 3 HP aerator.



## BLOWER CONTROLS

**Problem:** The customer needed an **outdoor blower panel** for a resort in the Caribbean. They required a panel with a main breaker; ability to monitor run time; and operate the blower during certain time periods.

**Solution:** We recommended using a **24/7 digital timer for the blower** on/off setting and using a Hand/Off/Auto (HOA) selector so they could run the blower any time. The timer was mounted on the panel door for easy access, along with pilot lights for blower run and motor overload. We added a main circuit breaker interlocked with the panel door. We also provided an IEC-rated motor starter sized for the blower motor.

## OIL SPOTTER CONTROLS

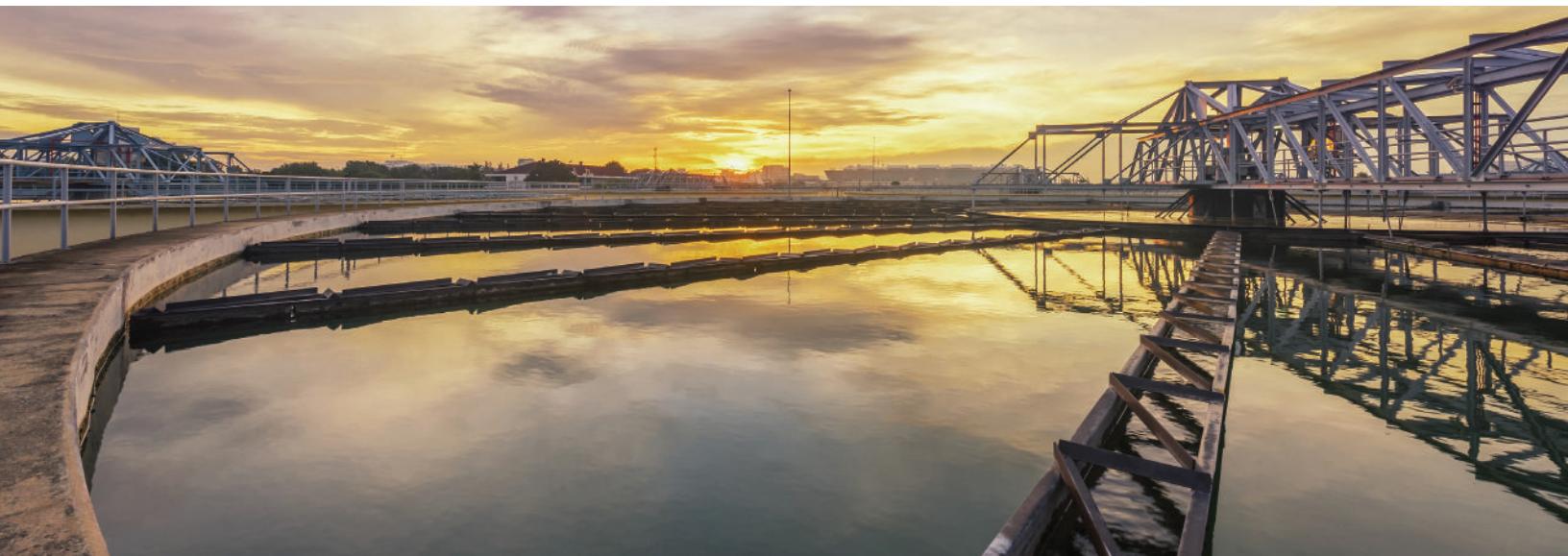
**Problem:** The customer needed a **three phase control panel** for a sump pump application that would automatically alarm them of oil, high liquid or high pump amps/locked rotor conditions. The pump was 460 VAC, 2 HP with a three phase motor.

**Solution:** We incorporated our **SJE Oil Spotter™ system** circuitry, used in our standard product line controls, into a custom control panel for the three phase 460 VAC application. We housed it in an outdoor Type 4X rated panel as required.

## WATER & WASTEWATER TREATMENT CONTROLS

**Problem:** The customer needed a control panel to be included in a wastewater treatment plant renovation. They had: three influent pumps operated from a submersible pressure transducer; three return activated sludge pumps (RAS) in another area controlled by an additional submersible pressure transducer; one scum pump controlled by a radar-type sensor; one sludge transfer panel; and one main lift station panel. VFDs were not required for all pumps. Pumps/motors ranged from 2 to 15 HP.

**Solution:** We provided **five total control panels** for this wastewater treatment application. Each panel had **VFDs for pump speed control**, along with: 30mm push-to-test pilot lights; main circuit breakers; pump breakers; a PLC and HMI; and a UPS to keep the panel PLC and alarm active in case of power outages. In addition, our programming team provided all **PLC and HMI programming** required for the treatment system, and connected all control panels into the wastewater plant's existing SCADA system. Panels were built with Type 4X stainless steel enclosures, with added air conditioning units.



# Our Services

## >> ENGINEERING

Our team of engineers has the experience you need to get your project done on time and on budget. From preparing comprehensive quotes in a timely manner to providing detailed submittal packages to meet your custom specifications, our engineers will impress.

## >> FABRICATION

We manufacture over **70,000 control panels** per year. With multiple UL 508A & UL 698A certified panel shops located across the USA, we stay on top of ever changing regulations such as DEP or Title 5. Having strategically positioned locations around the country allows us to load balance production to provide **faster delivery** to our customers.

## >> MATERIALS

We use a standardized set of components for each of our control solutions to maintain consistency when it comes to product identification and troubleshooting. However, we can also incorporate customer-specified products that may be required for the project.

## >> CONTROLLERS AND COMMUNICATION

We have a wide range of **user-friendly custom controllers** to meet any of your application needs, including float control, constant level control, and cellular remote monitoring communication.

## >> PROGRAMMING

Our dedicated programming team has **extensive PLC knowledge** to provide you with a complete custom solution if your project requires a PLC or other specified custom programming.

## >> QUALITY & TESTING

Every panel undergoes a rigorous checkout/testing procedure before shipping to ensure that the system performs as expected upon startup, per project requirements.

## >> SUPPORT & SERVICE

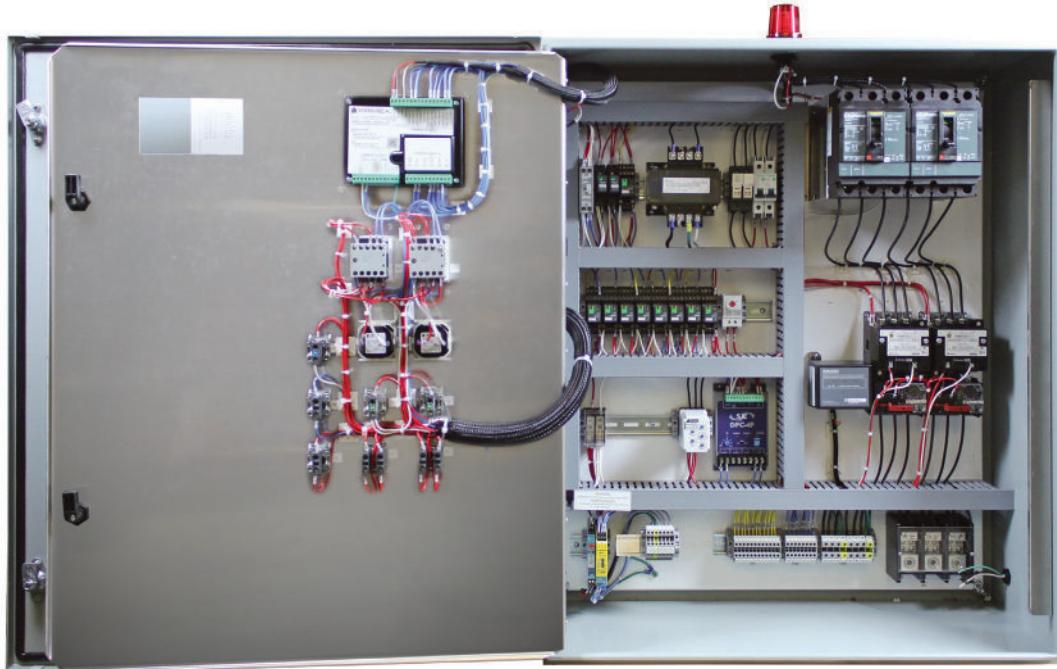
We pride ourselves on our **excellent customer service**. From quoting to project development to post-installation support, a member of our team will be able to help you out. We offer:

- Field start-up assistance
- Exceptional technical support
- Assistance writing specifications
- Free online engineering specifications
- Technical training
- Two-year limited warranty (or as quoted)



# OUR ACCEL™ PANEL PROGRAM:

## Pre-Engineered Panels with Accelerated Lead Times



Our ACCEL™ program is designed to deliver top quality control solutions in a **quick turn-around time** for simplex, duplex and triplex water & wastewater applications. We've pre-engineered our popular base models with select options that are quoted and delivered fast:

- Same day quotes
- 24-hour submittals (includes BOM, layout drawing and electrical schematic)
- 10-day build-to-ship

Use our new **self-service quote tool** to get instant pricing for your control solution. To get started, contact [panelquote@sjeinc.com](mailto:panelquote@sjeinc.com).

**ACCEL**<sup>®</sup>  
PANEL PROGRAM



## Who We Are

Since 1975, SJE has grown to become a leading manufacturer of reliable, trouble-free liquid level controls for the global water, wastewater and sewage industries. SJE is committed to providing engineering and manufacturing excellence to our customers. Our engineering expertise and broad range of core products uniquely positions SJE to deliver customized solutions with the reliability and performance our customers require. As one of the most experienced teams in the water & wastewater controls industry, we take your project from concept to implementation.

## GET A QUOTE TODAY

Email us at [panelquote@sjeinc.com](mailto:panelquote@sjeinc.com)

Call us at 1-888-DIAL-SJE (1-888-342-5753)

