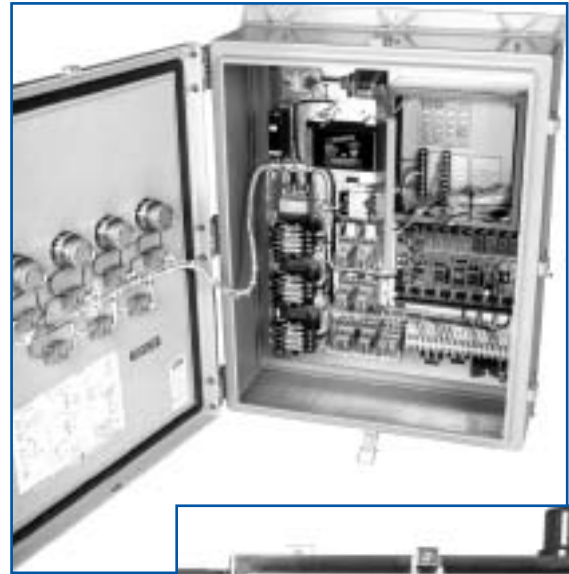




Custom Controls

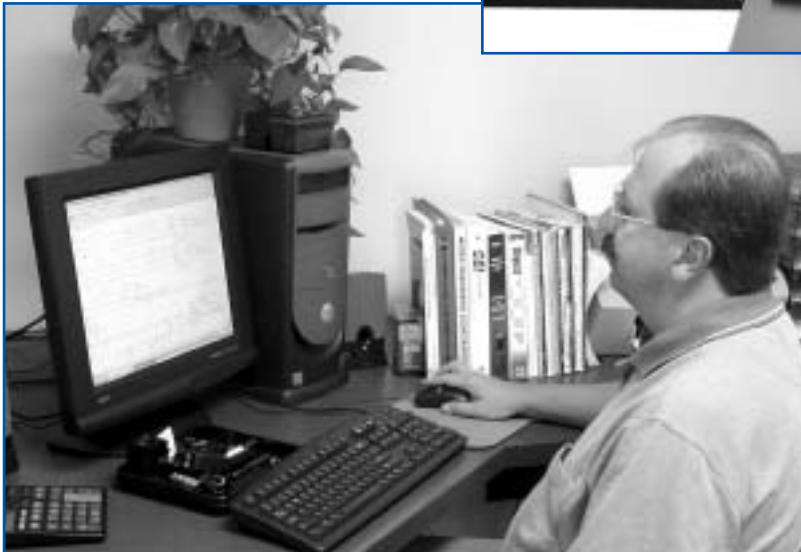
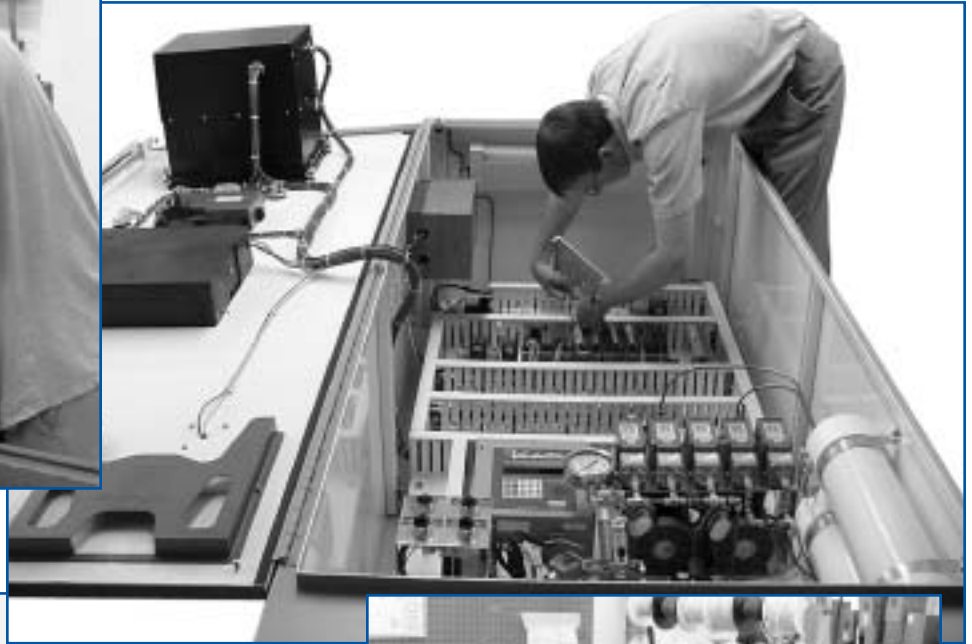
A major strength of CSI's product line is the custom control panel. From the manufacturing facility in Ashland, Ohio, CSI manufactures virtually any custom control imaginable. This includes special systems like PLC's, commercial water systems, specialized digital controllers, highly sophisticated telemetry equipment, and even VFD's. CSI has an engineering team capable of creating complete custom systems from scratch to meet your specific needs. Today, with over 52,000 feet of manufacturing space, each stage of the production process - from metal fabrication, panel layout, wiring, testing, and shipping is carried out using only the highest standards. With CSI in control, you can be confident that your project is handled by experienced professionals every step of the way. Shown are just some of the many custom special systems that are created everyday for our clients.



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Custom Controls



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"I receive quotes with-in 24 hours for all my custom control panels, and when the panel arrives to the job site all specs have been met and it's ready to be installed. It's always an easy installation when we have a CSI control panel."

John Pennini, Williamson Electric

"If you need a specialty panel built like a VFD or PLC, CSI is the place to call with their expert engineers and design staff, specialty panels are no problem. They also provide excellent service after the sale; they really care about their customers."

Ronnie Wells, Atlantic Pump & Equipment

CSI Controls offers one of the widest variety of control panel options available. In fact, there are so many we can't possibly list them all here. However, the following pages contain a photograph and brief description of the most popular options. The **Watchdog** and **Sentry** series controls come standard with features that are most in demand for today's uses. There are very few options available on the **Watchdog** and **Sentry** Series units. However, these systems are generally "in-stock" and can be shipped quickly to meet your needs.

When you need something special, CSI can construct customized wastewater, sewage, grinder & non-clog as well as water systems panels to meet your exact specifications. Also available are custom PLCs, VFDs and TONE systems with a vast number of options. Just choose from the options listed below when creating your own design. If there is something you want and don't see, just give one of our engineers a call with your request. Options shown below may vary in appearance on various panels but the functions remain the same.



Audible Alarm - Piezo Buzzer

This buzzer will sound on activation of any alarm condition that is connected to it. The decibel level at 2 feet is +/- 95.



Audible Alarm - Buzzer

This buzzer will sound on activation of any alarm condition that is connected to it. The decibel level at 10 feet is +/- 87.



Audible Alarm - Bell

This bell will sound on activation of any alarm condition that is connected to it. The decibel level at 10 feet is +/- 92.



Audible Alarm - Vibrating Horn

The pulsing horn will sound on activation of any alarm condition that is connected to it. The decibel level at 10 feet is +/- 103.



Light - Mini Pilot / Indicator / Alarm

These lamps can be used to indicate any status or alarm condition that is connected to it. Mounted on an outer or inner door but are for interior use only.



Light - Heavy Duty Pilot / Indicator / Alarm

Available in 22 or 30 mm, this oil tight lamp can be used to indicate any status or activation condition that is connected to it. Mounted on outer or inner door and is suitable for out door use.

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Common Control Panel Options



Light - Red Mini Beacon
 This main alarm light will light on activation of any alarm condition that is connected to it. It is mounted on top of the cabinet and is suitable for outdoor use.



Light - Red Beacon
 This main alarm light will light on activation of any alarm condition that is connected to it. Is mounted on top of the cabinet and is suitable for outdoor use.



Light - Red Strobe Beacon
 This main alarm light will pulse on activation of any alarm condition that is connected to it. It is mounted on top of the cabinet and is suitable for outdoor use.



Light - Red Vapor Tight Beacon w/ Guard
 This main alarm light is covered with a red glass lens and surrounded with an aluminum cage to protect the alarm lens and will light on activation of any alarm condition that is connected to it. It is mounted on exterior of the cabinet and is suitable for outdoor use.



Lightning/Surge Arrestor
 This secondary surge arrestor is used for protecting components against power surges from lightning and other erratic variations in the power supply.



Flasher - Solid State
 This component is wired into the visual alarm circuitry for any lamp and causes the alarm lamp to flash. It is UL recognized.



Switch - Oil Tight Selector
 Available in 22 or 30 mm, this 2 or 3 position switch is used for manually actuating functions such as "On/Off" or "Hand/Off/Auto." It is designed for use with either indoor or outdoor systems, is oil tight and weather proof.



Overload Reset Button
 This is a "through-the-door" push button switch used for manually resetting or overriding a thermal cutout. It is designed for use with either indoor or outdoor systems and is weather proof.

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Outlet - Convenience
 This is a standard 115V/60Hz convenience outlet which is GFI protected. It is typically installed on the outside of a cabinet for indoor use or on the inside of an outdoor system. It must be protected from weather conditions.



Outlet - Cover
 This is a standard weather proof outlet cover for use with GFI protected outlets. It is typically installed on the outside of a cabinet for systems that will be exposed to weather.



Outlet - Raised Cover
 This raised cover weather proof outlet cover is for use with GFI protected outlets. It is typically installed on the outside of a cabinet for systems that will be exposed to weather and provides protection while outlets are in use.



Heater - Anti Condensate
 This 120V/120 Watt heater strip helps prevent condensation from forming in the interior of the panel and on components to reduce corrosion. It is designed for smaller panels and must be protected from weather.



Heater - Anti Condensate
 This 230V/200Watt forced air heater system helps prevent condensation from forming in the interior of the panel and on components to reduce corrosion. It is designed for larger panels and must be protected from weather.



Auxiliary Generator Receptacle
 This heavy duty receptacle is designed to provide a quick means for attaching a temporary power generator. It is usually installed on the exterior of control panels and is weather proof.



Programmable Timer
 This component allows for a wide range of programming options including days, hours and minutes. It has both manual and automatic modes as well as a battery back-up system.



Event Cycle Counter
 This component keeps track of up to 999,999 various cycle events. It must be protected from weather.

CUSTOM



Common Control Panel Options



Elapsed Time Meter

Keeps track of elapsed time for various components up to 99,999 hours. It must be protected from weather.



Relay - Intrinsically Safe

This single ISR component option is designed for potentially hazardous environments and protects against sparks at a given circuit.



Relay - Intrinsically Safe

This multiple ISR component option is designed for potentially hazardous environments and protects against sparks at a given circuit and handles up to four (4) circuits.



Telemetry System

This auto dial enunciator option will automatically send a message or signal via telephone lines to a designated point upon any programmed alarm or default condition. Various types and styles with a wide array of features are available.



Pressure Gauge

This component is designed to offer precise monitoring of system pressure for water system controls.



Pressure Switch

This component is designed to offer precise switching for pumps based on system pressure for water system controls. It features fully adjustable cut-in/cut-out pressure range settings.



Alternator w/Selector Switch

This option permits the field selection of normal duplexing action, locking-in the A/B sequence or B/A sequence.



Phase/Voltage Monitor

This option is designed to protect pump motors against phase loss, under voltage and phase reversal conditions.

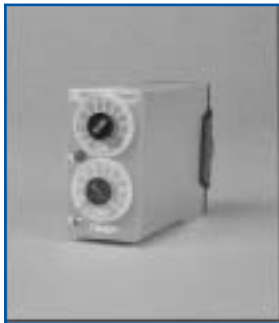
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Solid State Time Delay
 This option provides standard logic functions including any one of; On Delay, Off Delay, Interval, One-Shot, Repeat Cycle, etc.



Multi Function Solid State Time Delay
 This option offers selectable, multiple time ranges and functional logic modes. This particular module has two five-position rotary switches for selecting time ranges.



Repeat Cycle Timer
 This option provides independently adjustable "On" and "Off" cycle times for a variety of applications including intermittent alarm signalling and time dosing.



7 Day Timer
 This component allows for a wide range of options including 7 day, hour and "15 minute" programming intervals.



Digital Process Controller
 This solid state component contains a microprocessor and is designed for use with pressure, temperature or flow transducers for accurate control and measurement.



Automatic Reset Silence Circuit
 This feature allows the audible portion of an alarm circuit to be silenced yet allows the visual alarm lamp to remain active. When the alarm condition clears, this relay automatically resets the audible capability for sounding during any future alarm condition.



Battery Back-Up System
 This feature is highly recommended for alarm circuits in those applications where power supplies are unreliable or subject to frequent interruptions. This sealed cell battery also includes a 12 volt trickle charger.



Induction Relay
 This relay provides a versatile means for controlling many functions from remote locations with the safety inherent in low-energy sensing circuits.

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Enclosure Fan

Used with a vent, this component helps remove heat from the enclosure caused by other components or the environment.



Auto Dialer

These components give immediate notification of alarm conditions using any regular telephone line to call a telephone or pager.



Soft Start

To prolong motor life these components start motors at lower voltage and gradually increase the voltage.



Variable Frequency Drive

VFD's allow motors to be run at different speeds and can be used to create 3 phase from single phase.



Programmable Logic Controller

PLC's provide unlimited control possibilities through the use of a microprocessor. It greatly reduces the size of control panels over conventional relay logic.



Digital Display Center

CSI's (DDC's) are easily added to any Titan Series Panel at anytime by just plugging in a ribbon cable. Available options include: cycle counter, elapsed time meters, time dosing and even liquid level display (pressure panels only)



UL 508A Listing

This option insures that each system is built under the strict guidelines of Underwriter's Laboratory 508A specifications. Each system is marked with the appropriate UL label.



UL 698A Listing

This option insures that each system is built under the strict guidelines of Underwriter's Laboratory 698A specifications. Each system is marked with the appropriate UL label.



THE COMMANDER

The Commander uses state of the art solid-state circuitry to incorporate many of the necessary functions required of today's liquid level control products. It combines functions of a pressure transducer, alternating relay, lag pump time delay, lead pump selector and 4-20mA output into one simple unit. For more information on this product see page 10.



Titan Controllers

The Titan Series of liquid level controllers incorporate many of the necessary functions of today's level control products into one clean looking bezel for sub-door installations. Available in simplex and duplex, float and pressure these systems pack a lot of features into smaller enclosures. For more information on these products see pages 15 & 16.



PAC 1

Incorporating CSI's proprietary Pressure Bell this simplex controller allows the installer to adjust all level settings on the controller itself outside of confined space by simply turning dials. Other features include a hand run and push to test buttons, pump run and power lights. For more information on this product see page 13.



PAC 2

Incorporating CSI's proprietary Pressure Bell this duplex controller allows the installer to adjust all level settings on the controller itself outside of confined space by simply turning dials. Other features include a hand run and push to test buttons, power and pump run lights. Also, an alternating relay, 4-20 mA auxiliary output, and a 10 second lag pump delay are built in. For more information on this product see page 14.



RETRO PAC 48

This product allows the benefits of the CSI pressure system to be simply retrofit into any existing panel. The unit ships with pre-cut leads hanging from the bottom so installation is as simple as wiring the leads into the corresponding float leads on the terminal strip of the existing panel. For more information on this product see page 11.



RETRO PAC 240

The ability to control a 0-20 ft (240 inch) pumping range is just one of the many features this unit includes. Also included are 4 relay outputs, a 4-20 mA output, and simple two button programming. For more information on this product see page 12.

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Common Enclosure Types



Painted Steel Enclosure

Available in NEMA 1, NEMA 3, NEMA 3R, NEMA 4 and NEMA 12.



Fiberglass Enclosure

Available in NEMA 4X



Fiberglass Enclosure

Available in NEMA 4X



Stainless Steel Enclosure

Available in NEMA 4X



Polycarbonate

Available in NEMA 4X

CSI *controls*

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Again, these are just some of the most commonly ordered equipment options for control panels of all types. Many of these items are shown as “options” on the individual “Design & Pricing Wizard” sheets. You simply select your base unit then add as many of the above options that suit your needs.

Remember, if there is an option or feature that you want and don’t see listed, just contact one of our design engineers for assistance.

NOTE: The items shown on the previous pages are representative of the types and styles of options. They may vary slightly in appearance in a system due to various suppliers of our subcomponents or possible design changes.