Instrumentation and Controls Services

ACS delivers a streamlined controls solution. From control panels for specialized equipment to life safety and total building systems, ACS provides panels for a variety of applications. Designs are provided to run individually or to be incorporated into a more complex system. A simple user interface allows for ease of use with minimum on-site training. Client ownership of our systems allows for maximum flexibility and minimal downtime. Each system is designed to allow for future modifications and expansion.

ACS provides single-source turnkey solutions for industrial controls and electrical distribution panels for all types of facilities.

For an automotive client, ACS provided a custom control system for end-of-line testing of engines.

- Integrated solution was a multi-discipline approach with National Instruments (NI) platform, high speed data acquisition, design and fabrication of the fixture, and control solutions integration
- Design and fabrication of the control panel enclosure utilized compact RIO hardware from NI
- NI-based control system maintained oil tank temperature and motoring speed per the test profiles while acquiring both low- and high-speed data
- Upon completion of the test, the data was ported to an existing SQL Server database
- Boom-Box interface panel was designed for interconnect wiring between the unit under test and the control panel enclosure
For a client’s food and beverage manufacturing facility, ACS delivered:

- Design of the control systems for the process wastewater system, material handling, process control, and inspection areas
- On-site management of controls contractor during the installation and construction phase
- Manufactured the control panels for the systems through inspection. The panels included Allen-Bradley PLCs, motor controllers and starters, system communications, and operator interfaces
- All programming and site startup for the control panels and their associated equipment and processes. The control panels interfaced to third-party equipment as well as ACS-procured field devices

ACS’ instrumentation and controls group has a wide range of experience integrating control panels into facilities and equipment. Examples include fluid conditioning systems, component testing systems and skidded equipment. Our team has provided services for contract engineering, control system design and build, Programmable Logic Control (PLC) and Human Machine Interface (HMI) programming, control panel installation, control panel commissioning and on-site technical support.

ACS fabricates the systems at our Middleton, WI manufacturing facility. Utilizing our UL listed panel build shop, our process delivers efficient and economical results. Following fabrication and Factory Acceptance Testing (FAT), each panel is delivered, installed and commissioned at the customer site. Ongoing operations and maintenance support is provided by electrical engineers, licensed electricians, and technicians.

Partial List of Clients

- 3M
- AEARO Technologies
- Allison
- Argonne National Lab
- Ariel Corporation
- Battelle
- Bombardier
- Borg Warner
- BP
- Caterpillar
- Consolidated Diesel
- Corning
- Cummins
- Daimler
- Delphi
- Detroit Diesel
- Donaldson
- Eaton
- EMD
- FG Wilson
- General Electric
- Hamilton Sundstrand
- Harley-Davidson
- HATCI
- Hendrickson
- John Deere
- Lovelace Respiratory Research Institute
- Mahle
- Modine
- MTU
- Navistar
- Oak Ridge National Lab
- Perkins
- Polaris
- Ricardo
- Umicore
- Waukesha Engine

The ACS Difference

Working as strategic partners, we align our team expertise with the specific needs of each project. Our success is founded in our ability to provide our customers a highly qualified team of experienced professionals for planning, design, construction, equipment integration and ongoing maintenance of facilities.

ACS Services

- Single source integrated delivery
- Facility design
- Construction management
- Systems integration
- Equipment specification, selection & procurement
- Specialized test equipment design & fabrication
  - Instrumentation and controls
    - Facility & equipment commissioning
    - Data management
    - Preventative maintenance