



In Brief

Delco Automation Inc. is an engineering, system integration, manufacturing, and field service firm specializing in industrial control and information systems.

Delco Automation serves North American clients in the agricultural, building environmental and security controls, water and wastewater, energy, natural resources, pipeline, petrochemical, forestry, food processing, and manufacturing industries.

Delco Automation is a "one-stop" single source of technical expertise in process control, SCADA, DCS, PLCs, information systems, instrumentation, measurement, telecommunication systems, and control centers.

Delco Automation performs feasibility and planning studies, followed by detailed design, manufacturing, procurement, integration, training, and commissioning for "new build" capital projects and modernization's and retrofits.

Delco Automation can provide basic consulting, or can take complete turn-key contracting responsibility for any size of automation project, from small compressor control panels, to large plant modernization's.

Strengths

Delco's competitive advantages deliver results. Our clients are provided with a team of professionals that are committed and take pride in the quality and efficiency of the service they deliver. Our ability to combine engineering, manufacturing and field services provides turn-key solutions. Our systems are easy to operate and simple to maintain. Delco has trained field personnel to ensure downtime and modifications are minimized.

Delco is vendor-independent. This means that we can remain focused on our clients needs by ensuring that our engineering and purchasing remains objective and cost-effective.

Delco's major asset is our staff. Our team of professionals take pride in providing our customers the highest

quality of products, workmanship and service. Many of our engineers and technicians have over 10 years of direct field and operating experience in our customer's plants and businesses.

Delco enjoys long term relationships of continuing business based upon mutual trust and integrity. We go the "extra mile" to meet and exceed our commitments.

Delco's team operates to the highest standards of business and technical professionalism.

Financially secure, Delco is able to maintain the internal resources to develop technologies to enhance project efficiencies. This provides the most demanding of clients with project stability and continuity in long-term support.

High quality and productivity are a result of leading edge methods developed by Delco Automation in the areas of computer assisted engineering, control system implementation, and software development. We have been told by clients that our productivity is 10% to 20% higher than traditional engineering firms.

Strong project management skills, enabling both small and large projects to be completed on time and within budget.

The proven ability to engineer the most cost-effective solutions, and to perform all engineering phases of a project, from concept through commissioning.

The experience and expertise from over 10 years of system integration experience.



Full Range Of Modernization & Automation Skills

Delco Automation is a single source of expertise in all technologies related to an industrial automation project. Our skills uniquely encompass the entire path of industrial data flow, from the plant process and instrumentation, to the corporate computer network where business decisions can be made.

Our areas of proficiency include:

Automation Design-Build Project Management Delco Automation is committed to maintaining strong relationships with our clients. At Delco Automation, a project is complete only when the clients' expectations of value are met—not when contractual obligations are met.

Typical assignments have included:

- Turnkey project management for EPCM contracts
- Retrofits, renovations, and green field plants
- Specification Development
- Request For Proposal
- Automation Audits
- System Feasibilities and Bid Tabulations



Distributed control systems (DCS's) for control of refineries, petrochemical plants, gas processing plants, larger water and wastewater treatment plants, and other process facilities.

Operator Interface Terminals and HMI's for graphical display and control and data collection of plant process.

Programmable controllers (PLC's) for control of plants, process units, safety shutdown systems, compressor stations, and pump stations.

SCADA systems for control and management of pipelines, gas utilities, oil and gas production fields, water utilities, and electric utilities.

Information Technologies for more effective operations management and maintenance, using relational databases, web-based reporting, applications software, networking, and workstations.

Instrumentation and controls, ranging from control valves and pneumatic end devices to programmable microprocessor based devices.

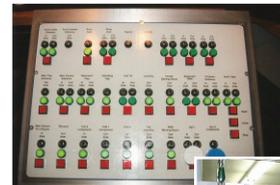
Measurement and analysis of gas, liquids, and solids for custody transfer, product accounting, modeling, and control applications.

Control centers and operations management centers, for the most effective integration of human resources, process control, and information.

Communication systems for SCADA, computer networking, and voice, using radio, microwave, satellite, common carrier, cable, or fiber optics.

UL/CSA Manufacturing of service entrance, MCC's, VFD's, PLC panels, control consoles.

Control System Start-Up, Service, & Maintenance System integration of all of the above subsystems.



Automation Engineering

Delco Automation adds the most value in providing turnkey automation solutions. This reduces the clients' efforts and costs in administering several subcontracts. It also improves project efficiency and quality. Delco Automation offers one source of responsibility for the performance of the complete control system.

- HMI: Intellution, Wonderware, Lookout, Rockwell C-View, RS-View, FactoryLink, PanelMate, RediPanel, Xycom, Nematron, PanelView, Magellis, Omron

The engineering stages typically include: Design Studies

- Basic and Detailed Engineering
- AutoCAD Drawing Production
- System Integration including configuration, programming, multi-vendor system staging, testing
- Construction Management
- Commissioning
- O&M Training
- Maintenance

Delco has developed specific expertise in the areas of: Advanced materials handling and recipe management, Batch control, Process Loop Optimization, Legal-for-trade scale applications, Integrated security systems, Malting processes, Mining processes, and Water and waste water treatment circuits to name a few.

Service & Support

We believe long-term care and maintenance of your system is paramount to protecting your initial investment, and reducing your life-cycle costs. That is why we have developed a PeaceOfMind™ Extended Service and Support Program that can be tailored for your specific needs.

Support packages may include our "24/7 HelpDesk" coverage option with proposed 30-minute response time. Remote troubleshooting and programming services via RAS or PC-Anywhere may also be included.

Our annual renewable support packages include preferred rates for system enhancements, software license upgrades, controller diagnostics, loop tuning, program housekeeping, tape or CD images of all drives, and Auto-CAD documentation as-builts.

Other services performed by our field technicians include instrumentation calibration, drive adjustments, and electrical maintenance.

Areas of automation expertise include:

- Electrical, Instrumentation, and Communications
- Process Information Management
- Advanced Data Analysis

- DCS: Fisher-, Bailey, Honeywell, Foxboro
- PLC's: A-B, G.E., Modicon, Omron, Ethernet, DeviceNet, FieldBus, Hart interfaces



Vendor Support Programs Guarantee Our Mutual Success

Delco has many established relationships with several recognized professional Partners in the industry. These support programs enable Delco to subscribe our Staff and Clients to regular training and product update sessions with the industries leading controls suppliers.

Additional benefits included in these programs are improved pricing levels and deliveries. Delco maintains current software versions of all leading manufacturers' product. We also own PLC's from the leading vendors. With such a well furnished laboratory for product testing and simulations,

application development can begin in Delco's office long before the Clients' materials arrive.



Information Technology

Delco Automation IT professionals incorporate the latest technology into state of the art nTier applications designed to take advantage of the rapid advancement in programming and hardware innovation. Microsoft Certified Professionals are on staff to provide expertise required to effectively evaluate technologies to be used. From state of the art database and distributed applications to custom

interface drivers Delco Automation programmers get the job done.

Our IT professionals provide the following services:

- Advanced Network Services
- Process Information Management (Data Mining)
- Data Historian Software
- Integrated shop floor to executive suite information system solutions are

developed using the following technologies:

- DOT - Net / C#
- COM, DCOM, COM+
- nTier business models
- Modular application design
- MS SQL Server
- Exchange Server 2000
- Outlook 2000 collaborative solutions
- Intellution EDA Toolkit
- Wonderware Toolkit
- MS Project



UL / CSA Manufacturing

Delco Automation provides best practices in industry to deliver your electrical and control products to your site, pre-tested and shipped to ensure optimal operation upon arrival.

Delco Automation offers one of the country's most thriving CSA shops with extremely skilled technicians. Centrally located in Saskatoon, SK we have shipped from our 5,000 sq. foot manufacturing shop, over 1000 electrical and controls products across North America.

We can manufacture the majority of your custom, low voltage CSA electrical and control products - from DCS, PLC, RTU and Operator Consoles to Custom Motor Control and Power Products. A full range of Class I and II products have been manufactured in a wide variety of NEMA ratings, utilizing the latest ISA, IEEE, EEMAC, CEC, IEC, JIC and ANSI standards.

We serve all major industries including water/waste water oil & gas,

petrochemical, manufacturing, mining, food & beverage, correctional security, forestry, pulp & paper, and agricultural industries.

Unique to Delco Automation's panel services are our in-house Controls Engineers and Instrument Technicians who are also available to provide functional testing when required - in our facility or at your site. Further, we also have in-house Journeymen available to provide on-site wiring of the products we ship.

Field Services

Delco Automation has Journeyman Electricians and Instrument Technicians in-house to facilitate on-site assistance during startups of our systems. This alleviates the Owner from hiring and training additional staff to manage the peak demand during a construction project.

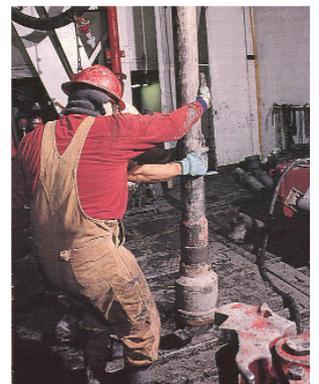
Our experienced personnel can assist with MCC, PLC, DCS, drive interface wiring and instrumentation calibrations and loop-backs. Many of our customers have discovered it makes

good business sense to "out-source" their engineering and maintenance services to Delco.

These customers enter yearly extended maintenance contracts, providing them with regular maintenance staff, and 7/24 hot-line access to knowledgeable engineers and technicians capable of quickly responding to emergencies.

Delco Automation has an installed safety program. We possess a

Certificate Of Recognition with the Alberta Construction Safety Association.



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Partial Client List

Agricore Co-operatives Ltd.	Golf Course Irrigation (numerous)
Agrium Fertilizers	Kenonic Controls
Alberta Public Works	Lockerbie & Hole
Amech Engineering	Luscar Coal
Borden Chemical	Mitchell's Gourmet Foods
BP-Amoco	Potash Corp. Of Sask.
Bridon Cordage	Prairie Malt Ltd.
Cargill Ltd.	Procor
Cameco Corporation	Saskatchewan Property Management
Can-Oat Milling	SaskPower
Cigar Lake Mining Corporation	SaskTel
City Of Regina	Sask. Water Corp.
City of Prince Albert	SNC
City Of Regina	Stantech
City Of Saskatoon	TransGas
City Of Surrey	UMA Engineering
Cogema Resources	United Grain Growers
Conor Pacific	University Of Saskatchewan
Correctional Services Canada	Water/Wastewater Plants (numerous)
CP Rail	Weyerhaeuser Pulp & Paper
CSP Foods	
Saputo	
Kilborn Engineering	

Milestone Projects

Cogema Resources McLean Lake Uranium Mine, Saskatchewan (\$450 million+ capital project) Managed the Automation Commissioning team including Engineers, Electricians, and Instrumentations to bring all process control systems online at a new uranium mine and processing facility. Circuits included 2 Water Treatment Plants, Potable Water SCADA system, Building Controls, Grinding, Leaching, CCD, Clarification, Reagents, Tailings Neutralization, Solvent Extraction, Strip Purification, Yellowcake Drying and Packaging, Acid Plant, Crystallization, Boiler and Powerhouse Utilities. The entire system included 10,000 plus I/O points. Provided Fisher-Provox DCS and Modicon PLC programming support. Supplied all CSA PLC panels and marshalling boxes.

BPX Milne Point, Alaska (\$400 million+ U.S. capital project) Provided A-B PLC and Fix HMI programming and commissioning services for major crude oil well site, refining, and pipeline facility. Developed and installed new PLC communications layer for well-site spreadspectrum SCADA system, leak detection software, and custody transfer station controls. System is in excess of 10,000 I/O.

Weyerhaeuser Pulp & Paper Boiler Addition, Prince Albert, Sask. (\$200 million+ Capital Project) Waste & Low Odor Project. Project included construc-

tion and startup of the following processes: Bark handling and recovery system, complex Water Treatment Facility, Black Liquor Recovery Concentrators, Recovery Boiler, Steam turbine and GE generator, Power monitoring system, Chemical addition skids, Upgrade of existing recovery and power boilers, Bleach/Digester Upgrades. DCS configuration, programming, and startup. Fisher-Provox DCS with interfaces to GE-Fanuc PLC90-70's, ABB Epic controllers, Betts-Dearborne WTP skids, GE Mach V Turbine controllers, and Power mentoring systems.

Prairie Malt Ltd., Biggar, SK (\$80 million+ ongoing capital projects) Exclusive supplier to one of World's largest Malt Producers. Engineering, programming, and commissioning of all additions and renovations including: Flexi 1 & 2 malt houses, Barley annex, condo, and workhouse storage and handling, malt storage silos, Wunderhoffen malt house, Kilns 1-5, Honeywell 9000 DCS display conversions, PLC energy management system and utility metering. Control Systems are Honeywell 9000 DCS, A-B PLC-5's and distributed Fix HMI. Services also include CSA PLC panels and custom MCC's, instrumentation and electrical maintenance.

City Of Saskatoon H.M. Weir Sewage Plant, SK (\$80 million+ capital project) Complete engineering, programming, commissioning, and CSA panel and

custom MCC supply. Control systems include A-B PLC5/80E and Fix HMI. Process circuits brought online included bioreactors, clarifiers, fermenters, thickeners, sludge management, gas generators, and power utilities.

Agricore and Cargill Inland Terminal Expansion and Upgrade Programs (\$200 million plus capital projects, numerous) Supplied complete automation design-build services for numerous concrete and steel inland terminals throughout the Prairie Region. Control systems were in excess of 1000 i/o points and included advanced materials handling and inventory algorithms. Equipment used was Modicon Quantum PLC's and distributed Wonderware HMI's.

Correctional Facilities., (Numerous New Builds and Upgrades) Delco is one of Western Canada's major suppliers of completely integrated building security systems for Federal and Provincial correctional facilities, military penitentiaries, and psychiatric health units. We have supplied complete design-build PLC and HMI automation services for maximum security facilities integrating door control, camera surveillance, lighting, intercom, and fire alarm systems throughout the Prairies and are now expanding nationally. Systems have included A-B, Modicon, Omron, and G.E. PLC's, Wonderware, RS-View, and Fix HMI.