



Automation Department Services

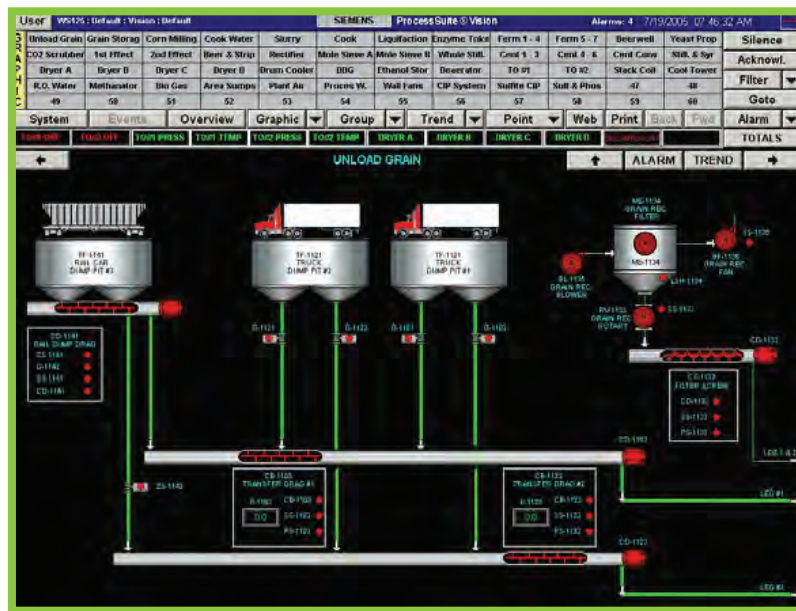
Top-notch automation support for plant startups and beyond

Instrumental in the success of our customers' ethanol plants, ICM's Automation Team develops the operator interfaces and control logic that support efficient plant operations. They also remain onsite during plant startup and commissioning to ensure the startup process progresses smoothly and everything runs as expected.

ICM provides plant startup assistance and ongoing support, including new product development

ICM's Automation Team is responsible for instrumentation, design, and support of ethanol plant Distributed Control Systems (DCS), enabling ICM-designed plants to run as efficiently as possible. We focus mainly on two areas:

- Designing and specifying instrumentation and automated systems
- Programming, startup, and long-term support of ethanol plants



Example DCS Control Screen for ICM-designed plant

Ongoing support for long-term success

ICM offers a DCS service contract to support your plant's automated systems through both routine and emergency services. Our contract offers the following features:

- Dial-up and e-mail services — 20 or 60 hours of service time
- On-site services — 4 work days
- Emergency shutdown services — An ICM representative will be at your plant site within 6 to 12 hours for any DCS-related plant shutdown
- Part support services — ICM guarantees the availability of a selected list of replacement parts





New automation products developed to benefit your plant

ICM has developed new products focused on improving your plant's efficiency and profitability. Both our Ethanol Advanced Process Controls (APC) and our ICM Plant Information Management System (I-PIMS) can be integrated with our DCS system, or they can be purchased on an individual basis.

24/7/365

In emergency situations where you need to talk to an industry expert as quickly as possible, ICM's experienced team is never more than a phone call away. Day or night, you can reach our Emergency Hotline at 888.237.8163.

Learn more about our Automation Department Services or the 30-plus other products and services ICM has developed to meet your plant's needs! Call our Customer Service department today.

877.456.8588

Ethanol Advanced Process Controls (APC)

In a strategic alliance with AATG and Matrikon, ICM has developed customized advanced process controls for ICM-designed ethanol processing facilities. This APC enables 24/7 optimization of specific processes through the existing ICM DCS, translating to repeatable increases in plant productivity and energy use reduction year after year. The already efficient design of ICM ethanol plants is even further enhanced through the strategic implementation of our APC system. This product can be installed in an existing plant, or it can be integrated into a new facility's design.

GROUP	APC CONTROLS	TAGNAME	DESCRIPTION	LO LIM	TARGET	VL	SP	PV	HI LIM	MODE
BEER COLUMN APC	MV	PIC 4107-SP	Steam flow to evaporator	0.0			0.0	0.0	0.0	ON OFF
	CV	OFF 10MP	Beer column delta 1	0.0				0.0	0.0	ON OFF
	FT	PIC 2413-SP	Beer column feed				0.0			ON OFF
	FT	TI 84103-PV	Beer column feed temp					0.0		ON OFF
SLURRY SOLIDS APC	MV	DIC 1502-VL	Mill 1 feeder speed %	0.0				0.0	0.0	ON OFF
	MV	DIC 1506-VL	Mill 2 feeder speed %	0.0			0.0	0.0	0.0	ON OFF
	MV	PIC 1204-SP	Total solids-water	0.0	0.0		0.0	0.0	0.0	ON OFF
	CV	FT 2204-PV	Slurry solids inferential	0.0	0.0			0.0	0.0	ON OFF
	CV	CVWR	Grain to water ratio	0.0	0.0			0.0	0.0	ON OFF
	CV	TI 1303-PV	Mill 1 current					0.0	0.0	ON OFF
DRYER MOISTURE APC	MV	TIC 7111-SP	Dryer ambient temp	0.0			0.0	0.0	0.0	ON OFF
	MV	PIC 5010-SP	Syrup to dryer	0.0	0.0			0.0	0.0	ON OFF
	CV	DRYER MOISTURE	Dryer Mass Inferential	0.0	0.0			0.0	0.0	ON OFF
SIEVE KF APC	MV	PIC 4518-SP	Mole sieve pressure	0.0	TARGET		0.0	0.0	0.0	ON OFF
	CV	FT 1414-PV	Karl Fischer inferential	0.0	0.0			0.0	0.0	ON OFF
	FT	PIC 4618-VL	Mole sieve mass valve	0.0			0.0			ON OFF

Example APC Control Screen for ICM-designed plant

ICM Plant Information Management System (I-PIMS)

ICM's I-PIMS tool replaces existing ad-hoc management systems with a comprehensive, easy-to-use, web-centric management system. Features include:

- High-level data content — drillable charts, speedometers, and graphs
- Customized reporting
- Interfaces to lab and maintenance data
- Single-point data retrieval and analysis
- Useful information from corporate to operator level
- Improved data-mining capabilities
- Web-accessible
- Web-based HMI graphics
- Customer configurable
- APC performance monitoring

