

Food Engineering's 2008 Manufacturing Software Guide

Company	Web Address	Device Control	Machine Control	PC-based Control	Batch Control	HMI/SCADA	PIMS/MES/Shop Floor	EAI & Middle-ware
ABB Inc.	www.abb.com/controlsystems	✓	✓	✓	✓	✓	✓	✓
Activplant Corporation	www.activplant.com			✓		✓	✓	✓
Adaptive Resources	www.adaptiveresources.com			✓		✓		
Adonix	www.adonix.com				✓		✓	
Advanced Automation	www.advancedautomation.com	✓	✓	✓	✓	✓	✓	✓
Advanced Software Designs*	www.asdsoftware.com							
AFS Technologies*	www.afsi.com							
Apatar, Inc.	www.apatar.com							✓
Ashcom Technologies, Inc	www.ashcomtech.com							
AspenTech*	www.aspentech.com						✓	
AssetPoint LLC	www.assetpoint.com							
Automation ONSPEC Software, Inc.	www.automationonspec.com			✓		✓		
Bosch Rexroth Corporation	www.boschrexroth-us.com	✓	✓	✓	✓	✓	✓	✓
CAT Squared*	www.catsquared.com	✓	✓	✓	✓	✓	✓	✓
CDC Software	www.cdcsoftware.com	✓	✓	✓	✓		✓	
Citect*	www.citect.com			✓	✓	✓	✓	
Conformia	www.conformia.com							
CSB-System International	www.csb.com	✓	✓	✓	✓	✓	✓	✓
CyboSoft	www.cybosoft.com	✓	✓	✓	✓			
Data Specialists, Inc.	www.dataspecialists.com				✓		✓	✓
Datacraft Solutions, Inc.	www.datacraftsolutions.com							
Deacom, Inc.	www.deacom.net						✓	
Emerson Process Management	www.emersonprocess.com	✓			✓	✓	✓	
FMC FoodTech*	www.fmctechnologies.com	✓	✓		✓	✓		
GE Fanuc Intelligent Solutions	www.gefanuc.com	✓	✓	✓	✓	✓	✓	
Hertzer Systems Inc.	www.hertzer.com			✓				
HighJump Software, a 3M Company	www.highjump.com						✓	
HK Systems, Inc.*	www.hksystems.com							
Honeywell Process Solutions	www.honeywell.com/ps			✓	✓	✓	✓	✓
Iconics	www.iconics.com	✓	✓	✓	✓	✓	✓	✓
IFS North America	www.ifsworld.com/us							
ILOG	www.ilog.com							
Inductive Automation	www.inductiveautomation.com	✓	✓	✓	✓	✓	✓	
Infor	www.infor.com						✓	✓
Informance International	www.informance.com							
Invensys Process Systems - Avantis	www.avantis.net							
Invensys Process Systems - Foxboro	www.foxboro.com	✓	✓	✓	✓	✓	✓	✓
Invensys Process Systems - SimSci-Esscor	www.simsci.com							
itelligence Inc.	www.itelligencegroup.com	✓	✓	✓	✓		✓	✓
Junction Solutions	www.junctionsolutions.com				✓			
KBMS*	www.kbms.com	✓			✓		✓	
Kewill Systems*	www.kewill.com							✓
Lab Ware*	www.labware.com							
LabVantage Solutions Inc.	www.labvantage.com							
Lawson	www.lawson.com							
Logility, Inc.	www.logility.com							
Microsoft Corporation	www.microsoft.com/consumergoods	✓	✓	✓	✓	✓	✓	✓
Mitsubishi Electric Automation, Inc.	www.meau.com	✓	✓			✓	✓	
National Instruments	www.ni.com	✓	✓	✓	✓	✓		
Norback, Ley & Associates	www.norbackley.com							

Plant Historian	SPC/ SQC	Predictive/ Adaptive Control	QA/ LIMS/ PAT	PLM	Production Scheduling	Enterprise Asset Mgmt.	OEE	Enterprise Mfg. Intelligence	Utility/ Energy Mgmt.	ERP	SCM	CRM	Special Applications
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Northwest Analytical, Inc.	www.nwasoft.com						✓	
Omron Electronics LLC	www.omron247.com	✓	✓		✓	✓	✓	✓
Oracle	www.oracle.com						✓	✓
OSISOFT, Inc.	www.osisoft.com							
Parsec Automation Corp.	www.parsec-corp.com						✓	
Phoenix Contact	www.phoenixcontact.com	✓	✓	✓		✓		
Pilgrim Software, Inc.	www.pilgrimsoftware.com						✓	✓
Preactor	www.preactor.com	✓	✓	✓	✓			
Prescient Applied Intelligence	www.prescient.com							
ProcessPro Software	www.processpromfg.com							
Proview	www.proview.se	✓	✓	✓		✓		
QAD, Inc	www.qad.com				✓			✓
Queen City Software Inc. (dba QC Software)	www.qcsoftware.com							
Reading Thermal Systems	www.readingthermal.com							
Red Prairie	www.redprairie.com							
Reimelt Corp.	www.reimelt.com				✓	✓	✓	
Rockwell Automation	www.rockwellautomation.com	✓	✓	✓	✓	✓	✓	✓
Sage Software, Inc.	www.sagesoftware.com		✓		✓		✓	
SAP	www.sap.com/usa							
Schneider Electric	www.us.telemecanique.com	✓	✓	✓		✓		
Siemens Energy & Automation*	www.usa.siemens.com	✓	✓		✓	✓	✓	
SignalDemand	www.signaldemand.com							
SoftPLC Corporation	www.softplc.com		✓	✓	✓			
Solarsoft Business Systems	www.solarsoft.com						✓	
Sopheon	www.sopheon.com							
St James Software	www.sjsoft.com				✓	✓	✓	✓
Sterling Commerce	www.sterlingcommerce.com							✓
Steton	www.steton.com							
SYSPRO	www.syspro.com						✓	✓
SyTech, Inc.	www.thereportcompany.com						✓	
Technology Group International	www.tgilt.com			✓	✓		✓	
Tetra Pak Inc.	www.tetrapakprocessing.com	✓	✓		✓	✓	✓	✓
Unisun*	www.unisuncorp.com							
Velocity Group*	www.velocitygroupinc.com							✓
Ventyx (formerly Indus International Inc.)	www.ventyx.com							
Vigilistics	www.vigilistics.com						✓	✓
Wonderware	www.wonderware.com			✓	✓	✓	✓	✓
xTuple*	www.openmfg.com						✓	
Yokogawa Corporation of America	www.yokogawa.com/us	✓	✓		✓	✓		
Zontec Inc.	www.zontec-spc.com					✓	✓	✓

*Notes: Based on 2007 data; D = Document Management, H = HACCP, Q = Query by Design

cialized software. According to Darren Riley, segment business lead, software and applications, at Rockwell, “If you have the right infrastructure, you don’t need any special software. HACCP is looking at specific control points, and I’ll bet you that plant people are realizing there are a lot more control points than just the temperature of the oven.” It’s the temperature of the facility that might be causing further temperature fluctuations. Or the temperature and pH of the CIP solution might also be important to prove HACCP data during an audit.

Charlie Rastle, solutions marketing manager at Rockwell, suggests having access to the right data is important for improving the process. Looking at Riley’s oven example, Rastle suggests measuring gas flow into the oven and looking at the combustion mixture to see if there are fluctuations that affect efficiency, quality and reject rates.

According to Dr. George Cheng, CTO of CyboSoft, automatic control of process and quality variables is much more important today because of high commodity and energy prices. Any waste in raw material and energy affects the bottom line. Some of these vari-

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ables include temperature, flow, level, pressure, pH, density, moisture, etc. The goal is to eliminate over/under heating and over/under drying so products are manufactured within the quality specifications at minimal material and energy consumption. “PID controllers are commonly used in the food industry. However, they cannot effectively control difficult process and quality variables such as steam temperature, pressure, density and moisture.” Unfortunately, Cheng says, these loops are often left in manual control, resulting in quality variations as well as energy and material waste.

For some applications, having the right data and a process model allows advanced control techniques to improve the process. Rastle suggests that for high-value applications (e.g., extracts, alcoholic beverages, oils), advanced control systems beyond the traditional PID loop can be used to optimize extraction or yield, or to make sure a quality standard is met.

Cheng says that model-based control such as model-predictive can help but is often too expensive to launch and maintain, so it is rarely seen in the food industry. Another