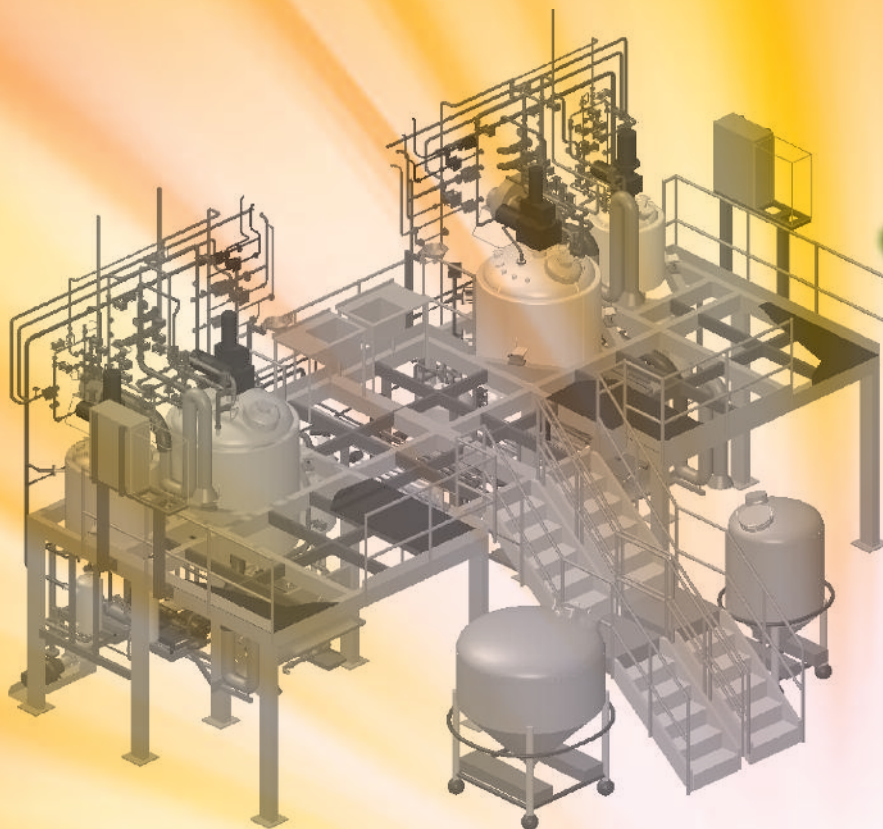



BatchWorX

Flexible Batch Process Management Software



Visualize Your Batch Process



Manage and improve your productivity

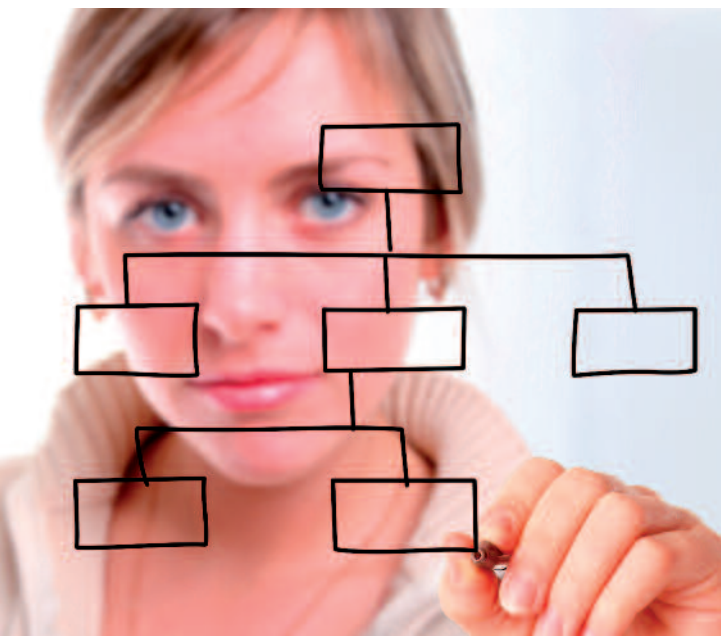
BatchWorX is powerful software that can be used in the most complex batching processes that require a high level of flexibility. Consistent with the ISA S88 flexible batching standard.

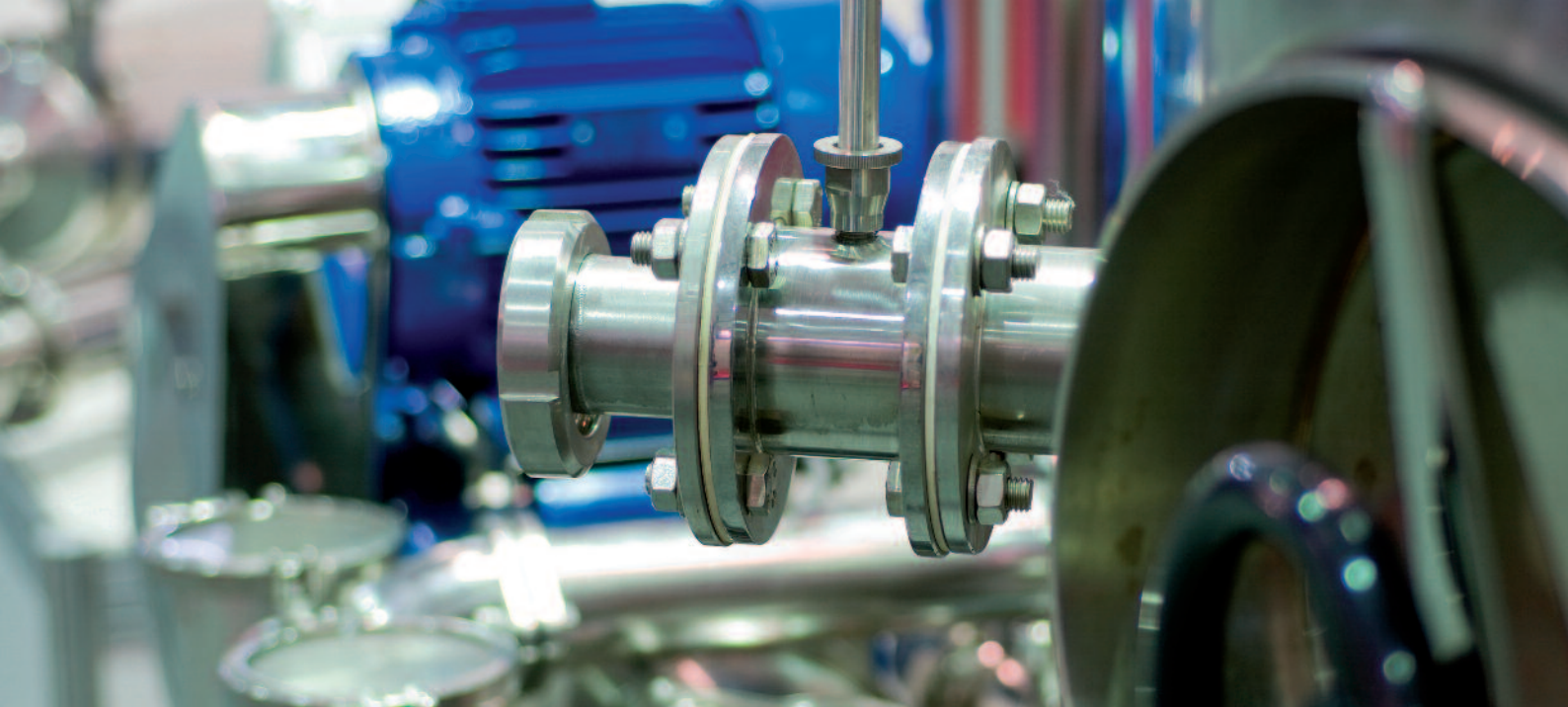
Using BatchWorX will increase your production efficiency, allow you to achieve a higher level of quality through increased batch consistency and will reduce your Total Cost of Ownership through reduced life cycle engineering, time to market and investment.

BatchWorX software provides a solution for effectively managing flexible batching processes found in various industries.

BatchWorX Capabilities

- ✓ Flexible Batch process Management
- ✓ Model your Batch Process
- ✓ Fully utilize capital capacity
- ✓ Schedule and execute batch processes
- ✓ Real time monitoring of the batch processes
- ✓ Ensure flexibility with ability to adapt
- ✓ Electronic Batch records
- ✓ Batch Information Management and Reporting (Powered by ICONICS BizViz suite)
- ✓ Fully OPC connectivity
- ✓ Natively integrate into the reliable, flexible and scalable ICONICS Genesis suite
- ✓ Scalable software architecture
- ✓ Facilitate 21 CFR Part 11 system design
- ✓ Compliant with ISA S88 flexible batching standard





Optimize your Production

BatchWorX Connectivity

Integrates seamlessly with other ICONICS products including **GENESIS** and **BizViz**, as well as your current SCADA/ software infrastructure

BatchWorX Recipe Manager

The BatchWorX Recipe Manager allows the management and configuration of formulae and recipes.

Formulae

Formulae define the composition of the batch which includes the ratios of ingredients. The formula definition can be the **template for a number of recipes**.

Recipes

A recipe is based on the formula and **defines the steps of how the formula will be used** to manufacture the required product. This includes the dosing stages, equipment to use and commands to issue such as mix times.

Recipe Operation

Each operation is carried out by running a process phase which **links plant equipment modules together** in routes. As recipes are selected to run on different elements, BatchWorX offers users only those phases which relate to those elements. This is achieved by using the Graphcet language, **Sequential Function Chart (SFC)**, which links phases together and enables you to easily describe the parallelism or the sequence of operations or phases. As soon as transfer phases are introduced in the recipe, materials defined in the formula are linked to the phase parameters so that routes are **automatically configured** for the selected plant equipment modules.

BatchWorX scheduler and Viewer

The BatchWorX runtime offers different batch management functions including planning, batch execution and real time batch process monitoring.

Planning

This function allows you to **plan batches and establish priorities through a scheduling program.**

Real time monitoring of batch process

- Measuring progress (current actual dosage, temperature and agitation speed,...)
- Phase state (default, stop, suspension, in progress, ...)
- Fault management (out of tolerance, out of flow, ...)
- Online Action by using command buttons including stop, suspension, resume and cancel
- Online modification on the recipe in progress for cancelling a step, inserting a step or modifying a step in progress.

Batch Validation

The Batch Initialization process will **check all the elements necessary** for successful batch execution including recipe and equipment module validation, availability of equipment modules and production unit reservations.

ERP/MES system integration

The system also allows for integration into your organization's ERP system such as SAP and other computer-assisted production management applications. You can easily interconnect and exchange data's through the ICONICS **BridgeWorX** module.

BatchWorX Information Management and Reporting

For each completed batch, **an electronic batch records execution** is created by collecting and logging data including raw materials, formulae, recipes, activated alarms and any user details to a history database. This can be any relational database such as **MSDE, SQL Server** or **Oracle** and can be easily extracted to produce useful reports through the ICONICS **ReportWorX** module.

Benefits

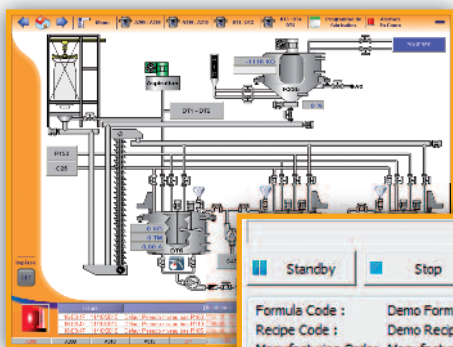
- ✓ Reduced your Total Cost of Ownership through reduced life cycle engineering, time to market and investment
- ✓ Increased flexibility during the batching process
- ✓ Increased your production efficiency and throughput
- ✓ Achieved a Higher level of quality through increased consistency

Applications

- ✓ Pharmaceutical
- ✓ Chemical
- ✓ Cosmetic
- ✓ Paint
- ✓ Varnish
- ✓ Glue
- ✓ Ink
- ✓ Food and beverage
- ✓ ...



Real time monitoring of the batch processes



Flexible and scalable batching processes

Graphics

Mixer1						
Standby Stop Resume Cancel						
Formula Code : Demo Formula		Formula Description :		Recipe Status		
Recipe Code : Demo Recipe		Recipe Description :		In progress		
Manufacturing Order :		Quantity : 100.000 Kg				
S...	Action	Product	Command	Setpoint 1	Measure 1	Setpoint
1	<Block Start -> Launch					
2	Dosage Tank1->Hopper 1	Product A		20.0000 Kg	20.0000 Kg	
3	Dosage Tank2->Hopper 1	Product B		20.0000 Kg	20.0000 Kg	
4	<Block End ->					
5	<Block Start -> Launch					
6	Dosage Tank3->Mixer 1	Product C		25.0000 Kg	25.0000 Kg	
7	<Block End ->					
8	<Block End -> Checking					
9	<Block End ->					
10	Agitator Mixer 1		ON			
11	Dosage Tank3->Mixer 1	Product C		25.0000 Kg	16.0000 Kg	
12	Discharge Hopper 1->Mixer					
13	Manual Introduction -> Mix	Product M		10.0000 Kg	0.0000 Kg	
14	Temporization			30.0000 Sec	0.0000 Sec	
15	Agitator Mixer 1		OFF			
16	<Block End ->					
17	Quality Control Mixer 1					
18	Discharge Mixer 1 -> Storage					

Real time monitoring of batch processes

Batch Report							
Table 1 - Detected Contaminants							
CONTAMINANT	UNIT	MEAS.	SET.	STATUS	MAX VALUE	MIN VALUE	SYMBOL
NON-METAL CONTAMINANTS							
1	TEMPERATURE	°C	50	OK	100	10	OK
2	PH		7	OK	10	6	OK
METAL CONTAMINANTS							
3	IRON	ppm	10	OK	100	1	OK
4	COPPER	ppm	10	OK	100	1	OK
5	NICKEL	ppm	10	OK	100	1	OK
6	LEAD	ppm	10	OK	100	1	OK
7	CHROMIUM	ppm	10	OK	100	1	OK
8	COBALT	ppm	10	OK	100	1	OK
9	ALUMINUM	ppm	10	OK	100	1	OK
10	ZINC	ppm	10	OK	100	1	OK
11	SILICON	ppm	10	OK	100	1	OK
12	MANGANESE	ppm	10	OK	100	1	OK
13	SODIUM	ppm	10	OK	100	1	OK
14	POTASSIUM	ppm	10	OK	100	1	OK
15	CADMIUM	ppm	10	OK	100	1	OK
16	ARSENIC	ppm	10	OK	100	1	OK
17	ANTHRACENE	ppm	10	OK	100	1	OK
18	FLUORENTHENE	ppm	10	OK	100	1	OK
19	PHENANTHRENE	ppm	10	OK	100	1	OK
20	FLUORANTHRENE	ppm	10	OK	100	1	OK
21	BENZOPHANTHRENE	ppm	10	OK	100	1	OK
22	PERYLENE	ppm	10	OK	100	1	OK
23	INDENOPERYLENE	ppm	10	OK	100	1	OK
24	FLUORANTHRENE	ppm	10	OK	100	1	OK
25	ANTHRACENE	ppm	10	OK	100	1	OK
26	PHENANTHRENE	ppm	10	OK	100	1	OK
27	FLUORENTHENE	ppm	10	OK	100	1	OK
28	BENZOPHANTHRENE	ppm	10	OK	100	1	OK
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32	ANTHRACENE	ppm	10	OK	100	1	OK
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45	FLUORANTHRENE	ppm	10	OK	100	1	OK
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95	ANTHRACENE	ppm	10	OK	100	1	OK
96	PHENANTHRENE	ppm	10	OK	100	1	OK
97	FLUORENTHENE	ppm	10	OK	100	1	OK
98	BENZOPHANTHRENE	ppm	10	OK	100	1	OK
99	PERYLENE	ppm	10	OK	100	1	OK
100	INDENOPERYLENE	ppm	10	OK	100	1	OK

Electronics Batch Record

Further information:

www.iconics.com

ICONICS FRANCE develops and distributes software BATCHWORX. BatchWorX software was designed in partnership with ICONICS Inc. to be fully integrated software suite GENESIS and BIZVIZ. The company ICONICS France has experience of over 15 years in the batch market.

Founded in 1986, ICONICS is an independent software developer with over 20 years of experience in Building Automation and Manufacturing markets. It's a leading provider of solutions which deliver real-time visibility for its Manufacturing and Building Automation customers. ICONICS' award winning real-time visualization, data historians, manufacturing intelligence, facility management and suite of analytics software solutions are installed in 70% of the Fortune 500 companies around the world, helping customers be more profitable, agile, efficient and sustainable.

ICONICS is a long time Microsoft Gold Certified Partner and Partner of the Year Winner, providing advanced software for many end users, building integrators and OEM equipment and technology suppliers. ICONICS has over 250,000 applications installed in multiple industries, with over 40,000 building control applications worldwide.

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