

# Reactor Automation • Data Logging

## CG-16005 RXNHUB CONTROLLER, AUTOMATED REACTION CONTROLLER



### Simplicity:

Control reaction variables from a single excel-like interface.

- Multiple step ramps for:  
Reaction Temp, Reagent Addition, Mixing
- Solution pH control
- Add multiple reagents based on:  
Time, Temperature, pH, Pressure

### Safety:

User definable alarms for all reaction parameters.

- Define alarm response, including emergency shut-down

### Versatile:

- Ideal for methods development and reaction optimization
- Exactly reproduce reaction conditions for production runs
- Methods storage and recall



RxnHub Infinity controller made for Chemglass by J-Kem® is a simple solution for automating reactors. Controller/Software automates the reaction process by controlling reagent addition, temperature control, stirring, data collection and other required parameters through one interface.

The RxnHub controller concept is to create custom instruments in software, similar to LabView®, but with two significant advantages:

**Better Hardware** – Ultrahigh resolution inputs, serial and digital interface components needed for laboratory and process control.

**Better Software** – Written in VB.net and designed specifically for your application. Using dot.net language removes many programming limitations and J-Kem® also releases the original source code. *Software can output to a read only encrypted Excel file that is CFR21 part 11 compliant.*

The genius of the Reaction Controller is that the sensors it's configured to read (pH probe, thermocouple, etc.) and the instruments it's configured to control (chillers, stirrers, pump, etc.) can be changed by the user as research needs change.

**KEM-RxC Software** organizes the controls of the Reaction Controller in a single tabbed document in table or graphical form. The addition of up to six reagents, temperature control and mixing can be programmed by the user and adjusted in real time. Software can be customized to meet virtually any reaction or process control requirement.

**Sensors** - Read any analog sensor to monitor and control pressure, flow rate, oxygen or ion concentrations.

**Instruments** - Automate other instruments, such as UV spectrometers, fraction collectors, pumps, and balances by placing them under the control of KEM-RxC software.

**Digital** - Monitor for external events or control external valves, motors, or virtually any other device.

### Automate Reaction Control:

- RxnHub Controller organizes the controls of the reaction controller in a single tabbed document in table or graphical form.
- The addition of up to 6 reagents, temperature control and mixing can be programmed by the user and adjusted in real time.
- RxnHub Control can be customized to meet virtually any reaction process or process control requirement.

### Automate:

- Liquid Pumps
- pH Control
- Circulators
- Pressure/Vacuum Control
- Balances
- Solid Addition
- Valves

### Sensors:

- Temperature
- pH
- Turbidity
- Dissolved Oxygen
- UV and In-line
- Pressure

### Custom Features:

- Import reaction conditions from Excel.
- Log reaction conditions and all run-time data to a customized out-put file.
- Periodically sample the reaction mixture.



Where chemistry meets biology.

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