

# Water Treatment Controllers



# W A L C H E M

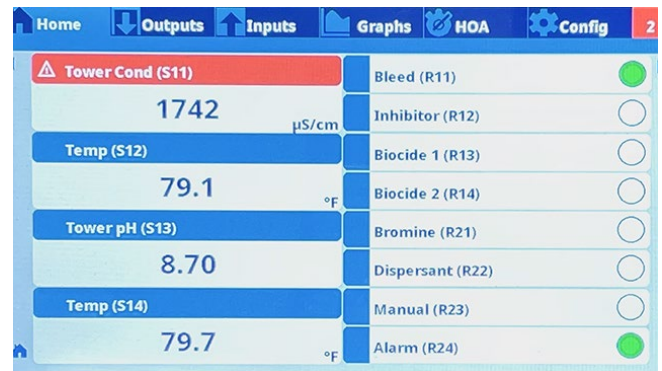
**IWAKI America Inc.**

Walchem integrates its advanced sensing, instrumentation, fluid handling and communications technologies to deliver reliable and innovative solutions to the global water treatment market.

Our in-house engineering is driven by quality, technology and innovation. For more information on the entire Walchem product line, visit [walchem.com](http://walchem.com).

# Intuition-9® Series

**The Intuition-9 Controllers** provide unparalleled versatility and a collection of sensors and powerful built-in algorithms for control of chemical metering pumps and valves in a broad range of water treatment applications



**Large, full color touchscreen display with icon based programming makes setup easy**

- Email, alarm messages, datalog, graph, or system summary reports
- Datalogging
- Ethernet or WiFi for remote access via the Internet, LAN, or optional BACnet or Modbus/TCP
- Universal sensor input provides extraordinary flexibility; the same controller can be used with almost any type of sensor needed
- Four I/O slots allow complete flexibility in adding sensors, analog outputs and Linear Polarization Resistance (LPR) corrosion sensors
- Multiple language support allows simple setup
- Three to twelve relay control outputs allow the controller to be used in more applications
- Sixteen virtual inputs and sixteen virtual outputs
- Economical wall-mount package for easy installation
- On-screen and web page graphing of sensor values and control output status
- Complete flexibility in the function of each relay

## Typical Applications for Intuition-9/Intuition-6/W100 Controllers

Wastewater Neutralization + Disinfection | RO Systems

Food and Beverage Disinfection | Potable Water Treatment | Swimming Pools + Spas

Cooling Tower/Boiler Control | Metal Finishing + Printed Circuit Board | Irrigation + Fertigation

# Intuition-6<sup>®</sup> Series

**The Intuition-6 Series Controllers** provide powerful programming and complete control in a broad range of water treatment applications.

- Large touchscreen display
- Universal sensor input provides extraordinary flexibility; the same controller can be used with almost any type of sensor needed
- Multiple language support allows simple setup
- Economical wall-mount package for easy installation
- On-screen and web page graphing of sensor values and control output status
- Complete flexibility in the function of each relay
- Datalogging
- Email alarm messages, datalogs, graphs, or system summary reports
- Ethernet option for remote access via the Internet, LAN or Modbus/TCP



**The Intuition-6 Series** has all the features of the W100 Series controller plus:

- Combination sensor input and analog input board that add even more flexibility
- Lead/Lag control of up to 6 relays
- Optional dual analog (4-20 mA) input for Fluorometers or nearly any other process value
- Six control outputs allow the controller to be used in more applications
- Six virtual inputs that are calculated from two real inputs (cycles of concentration, % rejection, etc.)



# Intuition-6<sup>®</sup> Series Metal Finishing

The **Intuition-6 Series Copper Nickel Controllers** provide reliable, flexible and powerful control of your electroless plating or etching processes and have all the features of the Intuition-6 Series plus:

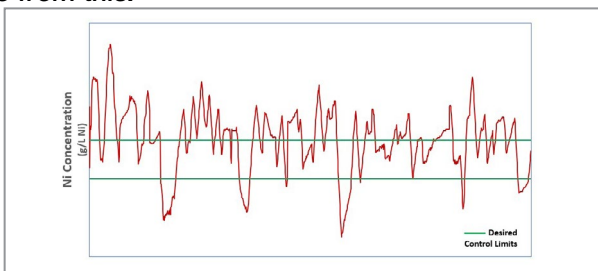
- Two sensor input slots providing extraordinary flexibility including the ability to monitor and control up to two electroless plating and/or microetch processes simultaneously
  - Copper or Nickel plus pH
  - Dual analog input for any 4-20 mA transmitter
  - Universal analytical sensors card for pH/ORP/ISE, conductivity or disinfection
  - Combination analog input and analytical sensor input
- Monitor your bath's concentration, pH and temperature and make chemical additions to maintain proper operating range
- Totalize based on time, volume or turns (MTOs) to gauge bath age
- User friendly interface to allow operators to easily change set points, alarms, interlocks, etc.
- Onboard data collection and built in parameter graphing
- Tie into production facility's LAN, DCS or other process management systems via standard ethernet protocols and/or Modbus TCP or BACnet



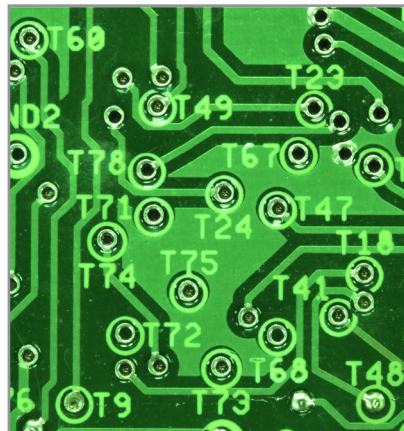
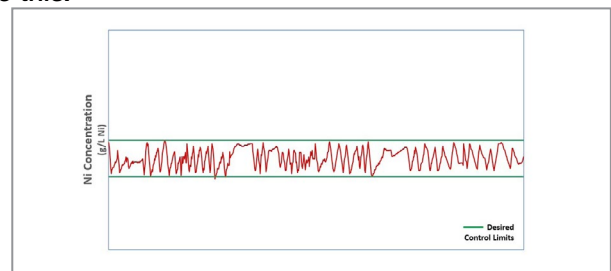
## Vastly Improve Your Process Control

With the Intuition-6 Series Cu/Ni controllers you can significantly improve your process control. Minimize chemical over feed and under feed to improve overall bath performance and product quality

Go from this:



To this:



# W100 Series

The **W100 Series Controllers** provide an economical and reliable way to keep your water treatment program under control.

- Large display with icon-based programming makes setup easy
- Universal sensor input provides extraordinary flexibility; the same controller can be used with almost any type of sensor needed
- Multiple language support allows simple setup
- The third control relay allows the controller to be used in more places than other entry level products
- Optional analog (4-20 mA) output for recording, datalogging, proportional control or connection to building energy management systems
- Wall-mount package for easy installation
- Complete flexibility in the function of each relay

## For Cooling Tower or Boiler Applications:

- Bleed on conductivity
- Bleed time proportional to makeup water volume
- Boiler blowdown on conductivity using intermittent sampling
- Feed in proportion to bleed time
- Feed time proportional to makeup water volume
- Feed as a percent of elapsed time
- Biocide timer with pre-bleed and post-feed bleed lockout options

## For General Conductivity, pH, ORP, and Disinfection Applications:

- Time proportional control
- Pulse proportional control (when purchased with 4-20mA or pulse solid-state opto outputs)
- In-range or out-of-range activation
- Probe wash timer
- Timer-based activation
- Activation based upon the state of a contact closure
- Timed activation triggered by a water contactor or paddlewheel flow meter's accumulated total flow
- Activate with other output
- Alarm
- PID control (when purchased with 4-20mA or pulse solid-state opto outputs)
- Probe wash timer



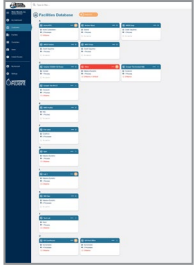
# Cloud-based water treatment management software tool that amplifies the value of Walchem controllers



## Key Benefits

- Real-Time Access to Your Process
- Mobile Device Friendly
- Alarm Notification with Escalation
- Data Graphing and Storage

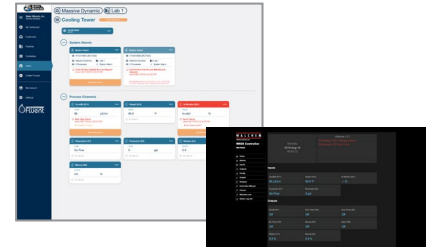
## Customer + Facilities Management



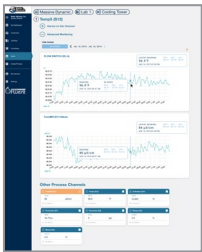
- Full management of customers and their facilities to access the information you need as quickly as possible
- Flag priority customers and facilities for quick access to help plan your upcoming work week

## Process Monitoring + Control

- Anywhere access to customer's real-time controller data
- Link directly to LiveConnect to make changes on your controllers remotely



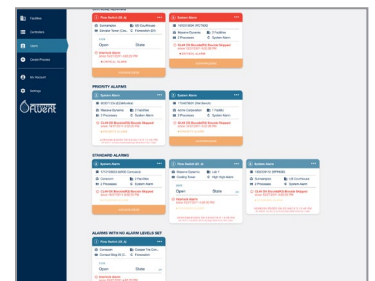
## Data Management + Visualizations



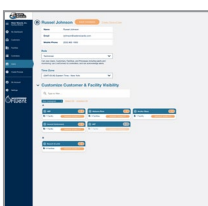
- Assess key parameters at-a-glance with customizable dashboard
- Easy-access to alarms organized by priority levels with acknowledgment features
- Bookmark customers, facilities and controllers for a user-customized dashboard experience
- Visualize recent and historical controller data trends on easy-to-read, interactive graphs
- Compare graphs across multiple controller channels
- Access historical data and export your graphs to PDF and CSV file for your reporting needs

## Alarms + Custom Notifications

- Manage workflow by notifying workers of triggered alarms
- Customize the escalation process including first party notified
- Notify two unique groups of users
- Manage alarm settings by controller channel
- Set alarm levels to quickly identify the most critical issues
- Alarm email summaries



## Team Management



- Create admin, technician, and view-only user roles
- Set custom visibility permissions for users so they only see the customers they need to access

# Sensors + Accessories

## High quality accessories for cooling tower, boiler, potable water, and wastewater applications

Carefully designed accessories and selected for compatibility with our pumps and controllers to enable our customers to provide a complete system solution. Here is just a sampling of the sensors and accessories available from Walchem:

### Disinfection Sensors

Amperometric disinfection sensors offer a cost effective and reliable solution to your disinfection control requirements. We offer sensors, in varying ranges of concentration, for free chlorine/bromine, total chlorine, chlorine dioxide, ozone, peracetic acid and hydrogen peroxide. Whether the application is cooling tower, food and beverage, drinking water, wastewater or swimming pool, these sensors are the ideal solution.



### Electrodeless Conductivity Sensors

Electrodeless conductivity sensors may be installed in a variety of very harsh chemical control applications, including oily cleaner baths, chromates, rinse tanks, fume scrubbers and other concentrated chemicals up to a conductivity of 1000 mS/cm (range varies with solution temperature).



### Fluorometers

The Little Dipper 2 and Pyxis in-line fluorometers are rugged, 24/7 sampling devices that provide maximum performance, minimal maintenance and solid state reliability. They can be used with data collection systems to monitor and control the level of treatment chemicals for cooling tower and boiler applications. The handheld Little Dipper is a small, lightweight and highly durable fluorometer ideal for quick measurements in the field.



### Water Meters

WFM Series water meters have earned a reputation for design simplicity, wide range of applications and accuracy in low-quality water. The WFM Series uses the widely recognized multi-jet principle, which has been accepted as an international standard for many years. These meters are available with either a two-wire reed switch, or a solid state, three-wire Hall effect sensor.



### Contacting Conductivity Sensors

Contacting conductivity sensors are ideal for use in cooling towers and boilers, reverse osmosis equipment, and other non-oily applications. A variety of cell constants are available to handle a range of conductivities.



### pH/ORP Sensors

Cost-effective differential pH/ORP electrodes for industrial and municipal applications.



### Copper/Nickel Sensors

Copper/Nickel Sensors are optoelectronic on-line analyzers designed for use in electrodeless copper/nickel baths, and microetch baths that contain more than 0.10 grams/liter (g/L) of copper or nickel ions. Immersible copper sensors are available for direct in-tank monitoring of solutions, or flow-through sensors that are designed for out-of-tank monitoring.



### Accessories

To complete your system, Walchem provides high quality accessories that are required for cooling tower, boiler, potable water, and wastewater applications. All of Walchem's accessories are carefully designed and selected for compatibility with our pumps and controllers to enable our customers to provide a complete system solution.



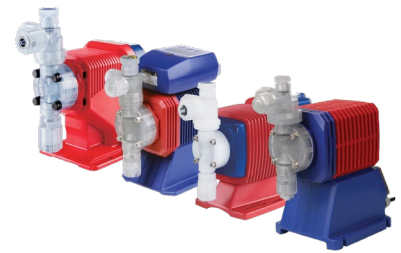
# Metering Pumps



**Walchem's IWAKI Metering Pumps** are available in both solenoid drive (E-Series) and direct drive (IX-Series) to meet all your chemical feed requirements.

**E-Series Metering Pumps** are powered by advanced micro-processor based electronics and have a superior mechanical design. Features include:

- Output capacities up to 20 GPH (76 LPH) and pressure rating up to 290 PSI (20 bar)
- High pump stroke rate, up to 360 GPM provide tremendous turndown ratios up to 1600:1
- Flexible pump control including manual, scalable analog control, digital input with multiple/divide, batch control, external stop, AUX and interlock inputs and analog and alarm outputs
- Options include degassing heads, multifunction valves and flow monitoring



**IX-Series Metering Pumps** are digitally controlled direct-drive diaphragm pumps. IWAKI's years of experience in high-end motor technology has resulted in an extremely accurate, energy efficient and high resolution metering pump. Features include:

- Output capacities up to 80 GPH (300 LPH) and pressure rating up to 250 PSI (17 bar)
- Turndown ratio of up to 1000:1
- $\pm 1\%$  accuracy due to precise motor control and efficient valve design



# W A L C H E M

**IWAKI America Inc.**

**Walchem** is a leading manufacturer of online analytical instruments and electronic metering pumps. Our mission is to provide the integration of sensor, pump and electronic technologies for chemical control. We provide innovative solutions by integrating our instruments, sensors, fluid handling, and extensive remote data communications technologies.

## **Our success is driven by three tenets:**

Advanced technology – Quality customer service  
Development of a superior workforce



Walchem products are sold and supported by a global network of fully trained Master Distributors that provide local stock and unmatched support. Find your local distributor on **walchem.com**

