# WALCHEM

An Iwaki America Company

# Water Treatment Controllers

# VTouch® Account Manager

VTouch is a collection of technologies designed for companies offering managed water treatment services. The VTouch solution allows service companies to more effectively manage remote accounts by significantly reducing the complexities associated with the deployment of water treatment service programs based around communicating products.

The VTouch Account Manager is fully synchronized with Walchem's web based controllers, making set-up and configuration simple and fast. Just specify the type of remote communications needed for new or existing controllers and Walchem takes care of the rest. No need to sort out and track complicated and constantly moving cellular data or dial-up ISP plans from large companies with poor customer service and unpredictable monthly charges. VTouch solves these problems by bundling the communications services, giving you a completely turn-key solution.

The innovative, fully synchronized nature of VTouch provides you with a quick, centralized 24/7 awareness of account status with the ability to LIVE Connect to any of your controllers in the field with one simple mouse-click, regardless of connection type! No phone numbers or IP addresses to remember.

## VTouch Account Manager: 'Smart' Service

- On-line, web-based summary of account status
  - Process values continuously updated including past 24 hour min, max and average values
  - Alarm status
- One-click LIVE Connect to any device in the field for full view and reconfiguration
  - Analysis, troubleshooting, adjustments
- Seamlessly organize devices according to a process(es), facility, customer, etc.
- User "access" and "permissions" management
- Eliminates surprises during 'routine' visits
- Makes service PROACTIVE not reactive
- SAVES TIME! Plain & Simple

## Cooling Tower and Boiler Water Treatment



### WebMaster®ONE Cooling Tower & Boiler Controller

WebMasterONE is the most advanced online cooling tower and boiler controller in the water treatment industry. The flexible multi-input/output platform allows you to control multiple cooling towers, boilers, closed loops, and condensate lines with just one controller. Four direct sensor inputs are available (choose from pH, ORP, conductivity, chlorine and chlorine dioxide) along with twelve discrete inputs, eight analog inputs, and four analog outputs.

An extensive assortment of integrated communications and data handling features is included that enables water treatment professionals to provide more effective water management services. The innovative, fully synchronized VTouch provides you with a quick, centralized 24/7 awareness of account status with the ability to LIVE Connect to any of your controllers in the field with one simple mouse-click, regardless of connection type! No phone numbers or IP addresses to remember.

All of the standard cooling tower and boiler water treatment control methods are included, as well as many unique control methods to improve your system's performance.

**Easy to start-up and use** - with just a web browser!

**Extensive Built-in Plug-n-Play Communications** Options:
- Ethernet
- USB (laptop and flash disk support)
- Landline modem
- Cell modem

**System Status Reports** and datalog files can be sent automatically

**Instant Alarm Notification** via email, cell phone text message or local alarm relay

**Wide Range of Direct Sensor Measurements**:
- pH
- Conductivity
- Free chlorine/bromine
- ORP
- Electrodeless conductivity
- Chlorine dioxide

**PPM set points with feed verification**

**Modbus read/write** is available for seamless integration with building energy management, distributed control, process management and SCADA systems



## General Water Treatment



### WIND WebMaster® Industrial Water Controllers

WIND WebMaster sets a new standard for Industrial Water Treatment Controllers. The WIND WebMaster has a flexible multi-input/output platform, a wide range of analytical sensor measurement capabilities, and an extensive assortment of integrated communications and data handling features.

The data can be retrieved automatically (email Excel file attachment) or manually, through the convenience of a standard USB flash disk. Beyond the extensive list of capabilities, WIND WebMaster has set an industry-wide ease-of-use benchmark. All together, it represents the perfect balance between innovation, flexibility, and simplicity.

**Fully integrates functions** of a transmitter, PLC, datalogger and auto-dialer into a rugged, industrial, NEMA 4X (IP65) package.

**No Proprietary Software** required to view live data – just a web browser. Access live or stored data remotely within the facility (LAN connection) or from anywhere in the world (cell or landline modem).

**No Expensive PLC Programming** and re-programming – all changes made intuitively using a standard web browser.

**Extensive Built-in Plug-n-Play Communications Options:**
- Ethernet
- Cell modem
- Landline modem
- USB (laptop & Flash disk support)

**A Wide Range of Direct Sensor Measurements:**
- pH
- Conductivity
- Chlorine dioxide
- Peracetic acid
- ORP
- Free chlorine
- Ozone
- Electrodeless conductivity

**PID Control for relay and analog outputs**

**Modbus TCP read and write capability**

**Instant Alarm Notification** via cell phone text message, email, or local alarm relay.

A variety of reporting options can be utilized to meet your needs. A system summary report provides a snapshot of current conditions and alarms. A datalog report can be sent on a regular basis for historical trending. In addition, email and cell phone text alarm messages can be sent.

## General Water Treatment

### WebAlert® Remote Monitoring and Datalogging

Walchem's WebAlert was developed to meet the increasing demands for improved operational efficiencies and enhancements to service programs that can be gained by continuous monitoring of remote equipment and systems.

WebAlert seamlessly web-enables your installed equipment, providing local and remote access to vital system information, without the need to physically visit remote sites.

Unlike PLC's or similar devices, WebAlert does not require a software programmer for customization to your application. This reduces upfront costs and eliminates recurring expenses for software maintenance. Commissioning is as simple as connecting with a laptop and following the intuitive menus to configure the WebAlert to meet your needs.

WebAlert monitors and datalogs analog and digital inputs from virtually any installed device, and notifies on-site and remote personnel of any system abnormalities.

The data handling and communications options in WebAlert are truly innovative. Ethernet and USB are standard features, therefore local or plant networked PC's can be connected and communicating with WebAlert in true Plug & Play fashion.

Authorized operators and quality control personnel can view LIVE system parameters and historical graphs, as well as receive emailed alarms, reports or datalog files.

**WebAlert integrates the functions of a monitor, data logger and auto-dialer** in one low cost package. It is easily customized to your application without the need for a programmer.

**System status reports** and datalog files can be emailed automatically on a regular basis. Instant alarm notification via cell phone text message, email, or local alarm relay.

**No subscription service**, monthly fees, or proprietary software is required. View data and program settings with just a standard web browser.

**Monitor up to six (6) 4-20mA signals** and six (6) discrete inputs.

**Access live or stored data remotely** within the facility (LAN) or from anywhere in the world.

## General Water Treatment

### WPH/WDP400 pH/ORP Controllers

WPH/WDP on-line process controllers are designed for a broad range of industrial, commercial, and municipal water treatment applications. WPH/WDP controllers are easily configured to accurately measure pH or mV (ORP) values from Walchem's WEL and WDS differential combination electrodes, or any conventional combination electrode.

A versatile output configuration allows you to program up to four outputs in a variety of control modes. Select from on/off mechanical relays or pulse proportional control for direct connection to metering pumps. The easy-to-use menu format and pre-wired, pre-mounted panel system options make set-up and installation quick and simple.

**Ideal for Harsh Environments**
The NEMA 4X (IP65) enclosure, combined with Walchem's WEL and WDS electrodes, provides a waterproof system with no BNC connectors exposed to wet or corrosive environments.

**pH or ORP Measurement**
- Configurable via a software menu setting.
- Reduces inventory requirements.

**Versatile Relay Configuration**
Control outputs can be set as high or low set points via keypad. Auxiliary outputs can be set as:
- High alarm
- Low alarm
- Probe wash
- In-range output
- Out of range alarm

**Probe Wash Feature**
For applications that require frequent electrode cleaning, automatic probe wash stretches out reliable measurement life between maintenance interruptions.

**4-20mA Output**
Internally powered and fully isolated, for connection to WebAlert, PLC or other devices.

**Differential pH**
WDP and WPH controllers are a perfect match with Walchem's WEL pH/ORP sensors - offering an extremely reliable differential measurement technique immune to any possible ground loop problems. WEL pH/ORP electrodes are easily removed and replaced without any tools.

## Cooling Tower Water Treatment

### WCT/WDT400 Cooling Tower Controllers

WCT/WDT Cooling Tower Controllers represent the latest in technological and innovative advancements from Walchem. WCT/WDT controllers maintain cooling tower water at correct conductivity by automatically bleeding water at high solids levels and adding low conductivity make-up water. Simultaneous control of chemical feed inhibits corrosion, solids precipitation, and scale build-up. Automatic addition of biocides prevents growth of algae and dangerous bacteria.

**USB Flash Disk Support**
Optional for data logs, event/relay and reset logs, and user configuration file import/export. Store conductivity and temperature values, water usage, relay and flow switch status, and user settings. A USB memory stick is all that's needed to extract the information.

**Four Chemical Feed Options**
- Feed & bleed simultaneously, with or without feed lockout timer
- Feed after bleed has finished, as a percentage of bleed time
- Feed as a percentage of time elapsed
- Feed as a percentage of make-up water

**Conductivity Electrodes**
- Graphite or stainless steel
- Low pressure or high pressure
- In-line or submersion

**Programmable Dual Biocide Timers**
- Choice of 1,7,14 or 28-day cycles
- Ability to add:
  - a single biocode at any time or
  - dual alternating biocides or
  - dual independent biocides

**Flow Switch Manifolds**
Optional integrated flow switch manifold may be panel mounted for quick professional installation with only two process connections.

**pH or ORP Control**
Choice of pH or ORP sensor for control of acid or chlorine/bromine addition.

**Alarm Output Relay**
Triggered by low conductivity, high conductivity or no-flow conditions.

## WECT/WEDT400 Cooling Tower Controllers

WECT/WEDT Cooling Tower Controllers with electrodeless (toroidal) conductivity sensors are based on our industry-leading WCT/WDT400 platform and include all of the same features. The electrodeless conductivity sensors require less frequent cleaning and calibration since they're impervious to contamination by oils, scale, biofilm, or other coatings. The result is a low maintenance system that provides reliable, effective control of cooling tower water. The resistance to fouling makes the WECT/WEDT400 controllers ideal for non-chemical cooling tower control systems.

### Programmable Dual Biocide Timers
- Choice of 1, 7, 14, or 28-day cycles
- Able to:
    add a single biocide at any time or
    dual alternating biocides, or
    dual independent biocides

### Alarm Output Relay
Triggered by low conductivity, high conductivity, no-flow conditions, bleed timeout, sensor error, and temperature error

### Self-Diagnostics
Software, electronics, and sensor are constantly monitored without having to take the controller offline.

### Conductivity Sensor
- Electrodeless, temperature compensated, CPVC
- In-line or submersion

### pH or ORP Control
Choice of pH or ORP sensor for control of acid or chlorine /bromine addition

### 4-20mA Output
Optional isolated 4-20mA output proportional to the conductivity reading.

## WBL/WCM400 Boiler Controllers and Condensate Monitors

WBL/WDB Boiler Controllers keep boiler water at the correct conductivity by automatically blowing-down water at high solids levels and adding low conductivity make-up water. Simultaneous control of chemical feed inhibits corrosion, solids precipitation, and scale build-up. Intermittent sampling is available to reduce operating costs for smaller boilers.

WCM/WDC Condensate Monitors control the conductivity of a boiler's condensate. When conductivity of the condensate exceeds an operator adjustable set point, the controller opens a diverter valve to prevent contaminated condensate from returning to the boiler.

### Choice of Measurement Units
To customize your control or complement your calibration procedures, conductivity may be displayed as $\mu$S or PPM; temperature as °F or °C.

### Four Chemical Feed Options
- Feed & blowdown simultaneously, with or without feed lockout timer
- Feed after blowdown has finished, as a percentage of blowdown time
- Feed as a percentage of time elapsed
- Feed as a percentage of make-up water

### Detects Flashing During Timed Samples
Rechecks the conductivity after the sample valve closes and reopens if the reading is now above set point.

### Self-Diagnostics
Software, electronics and sensor are constantly monitored, without having to take the controllers off-line.

### Automatic Temperature Compensation
Conductivity measurements are temperature compensated to ensure the highest accuracy.

### Choices of Blowdown Modes for Timed Samples
- In intermittent sampling, the blowdown valve is open until the set point conductivity is reached.
- In intermittent with timed blowdown, the blowdown valve opens for a set programmable time.
- In intermittent with time proportional blowdown, the blowdown valve opens for a variable time that is calculated based on the conductivity of the sample versus the set point.

## Cooling Tower & Boiler Water Treatment

# W400 Class

Walchem has raised the bar for mainstream water treatment controllers! The W400 Class includes cooling tower and boiler controllers with USB data collection features that give water treatment professionals the tools they need to deliver a higher level of service. UL/CSA/CE certified.

### Ensures Optimal Performance and Maximum Efficiency
Precise control of conductivity and chemical feed reduces water consumption and inhibits corrosion, solids precipitation, scale build-up, and growth of algae or dangerous bacteria.

### More Informative Monthly Reports
Download stored data from the controller to a USB flash stick. Use the data to easily develop reports that show actual water usage, system conductivity, temperature, and more.

### Efficient Customer Service
Quickly identify system upsets by knowing exactly what happened and when. An event log can be downloaded to tell you precisely when pumps turned on, valves opened, and when there was flow or no-flow.

### Validation and Verification Made Easy
Use stored data from the controller to simply and easily validate water treatment results. The data and event logs show water usage, system conductivity, and temperature, as well as accumulated chemical feed and bleed times.

### Save Time
Copy the user settings from your controller to a USB flash stick and upload to a new controller. Programming your new controller this way can be accomplished in seconds. It's that simple!

# W400 Class

Walchem is the world's leading manufacturer of water treatment controllers. The W400 Class includes disinfection, pH/ORP, and electrodeless conductivity controllers for a variety of industrial, commercial, and municipal water treatment applications. The integrated USB data collection features provide a new set of valuable tools to enable water treatment professionals to deliver more effective water management services. UL/CSA/CE Certified

## Dual Input Reduces Cost
Dual sensor inputs allow one controller to take the place of two, reducing cost and space requirements and simplifying installation.

## Versatility for a Broad Range of Applications
The W400 is one of the most versatile controllers available. Select from a variety of industrial grade sensors, output modes, and relay configurations to customize the W400 to your application. On/off and pulse proportional outputs are available for control of valves and metering pumps.

## Ideal for Harsh Environments
The NEMA 4X (IP65) enclosure, combined with Walchem's industrial sensors, provides a waterproof system with no metallic parts exposed to wet or corrosive environments.

## Built-in Safety Features
Programmable output limit timers prevent run-away chemical addition. Digital interlock input may be used from a flow switch or level input to prevent chemical addition based on a stagnant sample, or control of an empty batch tank.

## Simple, Integrated Data Collection
Download stored data from the controller to a USB stick with the press of a button. Use the data to simply and easily validate system performance, document compliance, and reduce liability. The data and event logs show measurement values, as well as accumulated chemical feed and relay activation times.

### WDIS410 Disinfection Controllers

Reliably and economically control your water treatment disinfection process. The controller includes four standard sensor input options (free chlorine/bromine, chlorine dioxide, ozone, peracetic acid) or can be configured to use a variety of other types of disinfection sensors, such as hydrogen peroxide or total chlorine. The chemical concentration is continuously monitored and controlled to the precise range required for proper system control and regulatory compliance. Designed to be flexible and versatile, WDIS controllers are the ideal solution for disinfection applications in cooling towers, food & beverage, drinking water, wastewater and swimming pools.

#### Disinfection Sensors
Free chlorine/bromine, chlorine dioxide, peracetic acid, ozone
- Integrated temperature compensation
- Relatively insensitive to changes in flow rate
- Large openings to prevent clogging
- Excellent long-term stability

#### Probe Wash Feature
For applications that require frequent electrode cleaning, automatic probe wash extends the time between maintenance interruptions.

#### Programmable Access Code
Secures set point parameters and prevents unauthorized use. Program any four digit access or disable the code requirement.

#### Versatile Relay Configuration
Control outputs can be set as high or low set points via keypad. Auxiliary outputs can be set as:
- High alarm
- Low alarm
- Probe wash
- In-range output
- Out of range alarm

#### Display Status at a Glance
Look at any set point without interrupting control or needing access code.

#### Self-Diagnostics
Software and electronics are constantly monitored without having to take the controller off-line. Any error messages are clearly displayed. A fifth relay is activated by any diagnostics failures.

### WEC/WDEC400 Electrodeless Conductivity Controllers

WEC/WDEC410 Series Single and Dual Input Electrodeless Conductivity Controllers measure conductivity of a solution up to 1000mS/cm via an encapsulated, non-contacting sensor to control replenishment pumps and alarms. They may be installed in a variety of very harsh chemical control applications, including oily cleaner baths, chromates, rinse tanks, fume scrubbers and other concentrated chemical environments.

Four conductivity ranges may be selected to configure the controller over a wide range of applications. Choice of measurement units is $\mu$S/cm, mS/cm, ppm and % concentration. The non-contacting, toroidal sensor technology is immune to thin coatings and the contamination and calibration problems to which direct contacting sensors are prone.

#### Ideal for Harsh Environments
The rugged, NEMA 4X (IP65) enclosure, combined with Walchem's electrodeless conductivity sensors, provides a waterproof system with no metallic parts exposed to wet or corrosive environments.

#### Single or Dual Input
One unit monitors two baths with control and alarm relay for each, resulting in considerable cost savings.

#### Time Proportional Control Option
- Selectable on front panel keypad
- Varies the pump or valve on-time depending on deviation from set point

#### Measurement Units
- Choice of $\mu$S/cm, mS/cm, ppm or % concentration
- % Concentration allows the user to enter up to 5 calibration data points

#### Self-diagnostics
Monitor performance without taking the unit off-line, permitting faster troubleshooting and less downtime.

#### Electrodeless sensor design
Measures accurately over a wide dynamic range which can be used in applications from 50 $\mu$S to 1000 mS.

## WNI/WCU Electroless Nickel and Copper Controllers

WCU410 Copper Controllers and WNI410 Nickel Controllers are optoelectronic on-line analyzers that measure the actual concentration of copper or nickel in solution. They are used in a variety of applications including electroless plating baths and microetch baths (including oxide-replacement types).

The WCU410 can be switched from electroless copper to microetch via the menu, eliminating the need for a second controller. It reduces the need for manual titration, improves yield, and in microetch applications, improves productivity by reducing the frequency of bath change-outs.

The WNI410 is available as nickel-only, or with a pH control option. Two separate pump outputs for nickel and reducer, and another for pH are used, each of which is capable of totalizing either pump on-time, volume pumped, or metal turnovers.

### Operator Adjustable
Concentration set point, alarm set points (high and low), dead band and pump on-time are all easily adjustable.

### Simple, Integrated Data Collection
Download stored data from the controller to a USB stick. Use the data to simply and easily validate system performance.

### Four Separate Control Relays & Outputs (WCU)
May be used to add copper, caustic, formaldehyde or chelator/stabilizer chemistries. Each output has a replenishment totalizer which may be set in units of time or volume.

### Optional pH Input Board (WNI)
May be used to add pH adjustment chemistry. Output has a replenishment totalizer which may be set in units of time or volume.

### Concentration Read in Units
Selectable between grams per liter (g/L) or ounces per gallon (oz/gal). Backlit digital display also acts as a bar graph for a continuous "visual summary" of measurement versus set point.





## ABOUT US

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

To complete your system, Walchem provides high quality accessories that are required for cooling tower, boiler, potable water, and waste-water 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.

Our in-house engineering is driven by quality, technology and innovation. For more information on the entire Walchem product line, visit: www.walchem.com



### Metering Pumps
E-Class metering pumps are the most innovative and comprehensive metering pump product line in the world. Over 50 years of pump experience and a commitment to superior mechanical design has led to the development of many industry firsts, including 360 stroke-per-minute technology, IP67 waterproof construction, and the world's highest capacity solenoid metering pumps.

### Accessories
Point level sensors
PosiFlow sensors
Wall mounting brackets
Polyethylene storage tanks
Multi-function/Tri-purpose valves
Multi-jet in-line flowmeters
Calibration columns
Solenoid valves and more....