



## ChemDacs Fundamental Control



**Just like everything else in life, if you Master the Fundamentals, the rest is Easy.**

In Water Treatment the Fundamentals are:  
**Halogen, pH, Conductivity & Treatment Chemical Dosing Rates**

We have integrated this philosophy into our newest line of controllers. Our **ChemDacs Fundamental** controllers utilize a unique “**open architecture**” which combines IEC 61131-3 **Programmable Control, Sensor Conditioning, Process Monitoring and Data Logging** into a single unit. Coupled with state-of-the-art **Tough Tip Probes and Electrodeless Conductivity & Chemical Flow Sensors**. Then add built-in **Ethernet & Internet, High-Speed Serial and Wireless Communications, Voice, Pager and E-mail Alarming**, for the most comprehensive control of your systems available today.

Monitoring capabilities include but are not limited to:

<i>*ORP</i>	<i>*Free Chlorine</i>	<i>*De-Chlorination</i>	<i>*Chemical Dosing Rates</i>
<i>*pH</i>	<i>*Conductivity</i>	<i>*Flow</i>	
<i>*Temperature</i>	<i>*Active Chemicals</i>	<i>*Zeta Potential</i>	
<i>*Corrosion</i>	<i>*Bio &amp; Film fouling</i>	<i>*Tank Levels</i>	

<i>*Cooling Tower Chemical Control</i>	<i>*Brewery, Pasteurizer Halogen Control</i>	<i>*Cookers &amp; Retort Halogen Control</i>
<i>*Waste Water, Polymer feed,</i>	<i>*Recirculated &amp; Once through systems</i>	<i>*Reverse Osmosis Dechlorination</i>

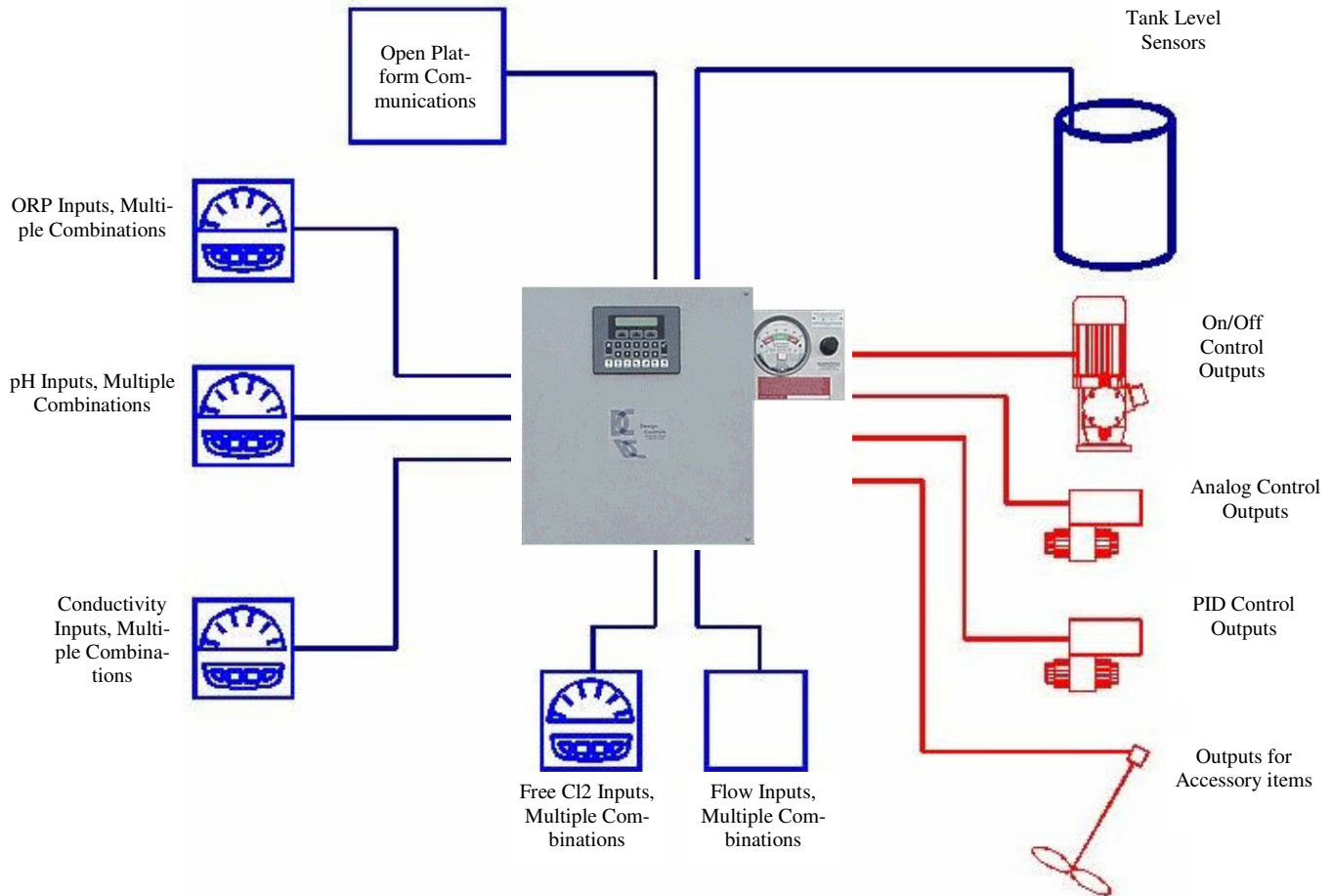
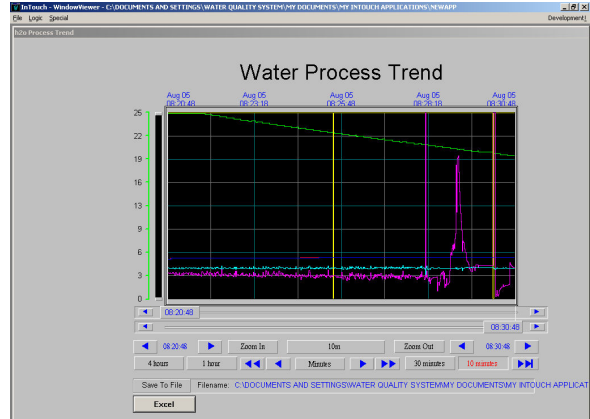
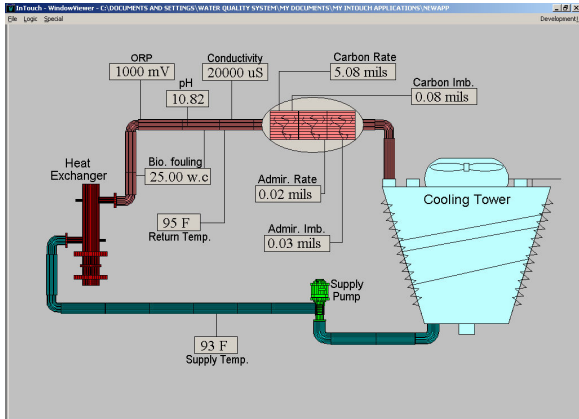
**Now you can see all of your critical processes real time without wires and expensive installation costs. Ask us for a Demonstration Today!**

For more information Contact:

DESIGN CONTROLS 9885 Drysdale Lane, Houston, TX 77041,  
800-677-7126 phone, 713-856-8866 fax, [mattw@designcontrols.net](mailto:mattw@designcontrols.net)



# ChemDacs Fundamental Control



For more information Contact:

DESIGN CONTROLS 9885 Drysdale Lane, Houston, TX 77041,  
800-677-7126 phone, 713-856-8866 fax, mattw@designcontrols.net



**DESIGN CONTROLS**  
**ChemDacs Specifications**  
**Universal (Analog/Discrete) Inputs**

Quantity	8 (4 Voltage and Current / 4 Resistive )
Input Types	Analog In: 0 to 5Vdc 0(4) to 20mA +/-300mV, 0-65K Ohms 10K thermistor (Type I & II) J,K,T,E,R,S,B,N Thermocouples 1000 ohm type 385 RTD (two wire or three wire) Discrete In: Dry Contact Closure to Common.
Discrete In Wetting Current	0.25mA maximum (20K resistor to +5Vdc)
Analog Resolution	16 bits (1 part in 65535)
<b>Discrete Inputs</b>	
Quantity	16 with LED indicators
High Speed Inputs	2 (up to 5KHz response)
Input type	Optically isolated with shared isolated common, AC/DC voltage
Input level	9-50 Vac/Vdc (24VDC version), 80 to 150 Vac/Vdc (120VAC version)
Maximum input level	50 Vac/Vdc (24VDC version), 150VAC (120VAC version)
<b>Pulse Inputs (Magnetic Pickup)</b>	
Quantity	2
Input Type	Adaptive Thresholding +/- 75mV (150mVpp) +/- 54V (108Vpp) Zero-Cross Thresholding +/- 25mV (50mVpp) +/- 54V (108Vpp)
Response	5kHz
<b>Discrete Outputs</b>	
Quantity	8 with LED indicators 4 Isolated relays
Output Type	4 relays with single common
Output Rating	250Vac/100Vdc max. 10A @ 125 Vac, 5A @ 30 Vdc
<b>Analog Outputs</b>	
Quantity	2
Output Type	0 or 4 to 20mA
Resolution	12 bits (1 part in 4096)
<b>Control &amp; Communications Processor</b>	
CPU	Intel 386EX, 25MHz
Flash Memory	16MB
RAM Memory	1MB
Real Time Clock	Dallas DS1689S (PC compatible)
<b>Processor: Input / Output (I/O)</b>	
CPU	Atmel ATMEGA64, 14.75MHz
Flash Program Memory	16KB
RAM Memory	1KB
<b>General Specifications</b>	
Dimensions	7.0" W x 6.0" L x 2.5" D (178mm W x 248mm L x 64mmD)
Power	8 to 26Vac, 10 to 36Vdc, (12Vac/14Vdc min for UPS battery charging)
Battery Management	Built-in UPS functionality with battery monitor and power manager (requires 14VDC power/12VAC or greater).
Temperature	-40°C to 75°C (-40°F to 167°F)
Humidity	5 to 95% RH (non-condensing)
<b>Communications</b>	
Serial Port Interfaces	2 ports: RS-232, 9 pin D Male.
RS-485	1 port: terminal block connection
Internal Communication Option	1 port: internal modem, radio, comport or cell modem
Ethernet	10Base-T (10 Mb/sec), RJ-45 modular connector
<b>Communications Options</b>	
Internal Spread Spectrum Radios	900MHz, 1W, up to 115K baud (w/external diagnostic port) 2.4GHz, 0.5W, up to 115K baud (w/external diagnostic port)
Telephone Modem w/Voice	56K baud, PC compatible
Internal Comport option	Provides RS-232 or RS485 connections in place of a radio option
Cell Modem	14.4k Baud TCP/IP modem with GSM/GPRS/CDMA network connectivity



## CUSTOM PACKAGE SYSTEMS



Design Controls custom fabrication capabilities include, **Pumps Stands, Tank Stands, Distribution Manifolds & Dilution Troughs** to name a few. Our use of corrosion resistant materials from Vinyl Ester fiberglass to schedule 80 CPVC plate make for rugged attractive equipment packages that last. Welded PVC & CPVC allow for rugged systems which can be custom designed to meet your application needs. So if you are tired of rusty worn equipment, give us a call

For more information Contact:

DESIGN CONTROLS 9885 Drysdale Lane, Houston, TX 77041  
800-677-7126 phone, 713-856-8866 fax, [cecilp@designcontrols.net](mailto:cecilp@designcontrols.net)



## AutoCal

The Last Draw-Down You Will Ever Make



- ◇ Automatically adjusts chemical feed pump output
- ◇ Works with Automatic or Manual metering pumps
- ◇ Designed for pulsating flows
- ◇ Works with any model and brand chemical metering pump
- ◇ Flowrates up to 14gph
- ◇ Real time readout in MI/Min
- ◇ Degasses hard to pump chemicals
- ◇ Compatible with most all chemicals.
- ◇ Pump failure alarms
- ◇ Time or Flow base feed
- ◇ Safer than manual drawdowns
- ◇ Eliminates operator error and loss of chemical feed

Design Controls Auto-Cal pump calibration system means you'll never have to perform a manual drawdown again. At the touch of a button The Auto-Cal system automatically performs a pump drawdown and displays your feed rate in MI/Min. In automatic mode it monitors your pump drawdown rate and adjust the pump to maintain a constant and continuous feed rate. The simplistic design is easy to use, reliable and safer than performing manual drawdowns. Our open cylinder design also works to offgas hard to pump chemicals like Sodium Hypochlorite. So call today and make the drawdown you just did, your last.

For more information Contact:

DESIGN CONTROLS 9885 Drysdale Lane, Houston, TX 77041  
800-677-7126 phone, 713-856-8866 fax, [cecilp@designcontrols.net](mailto:cecilp@designcontrols.net)