

# WIZARD 4000™ ADVANCED DIGITAL INDICATOR

FOR CHEMICAL USAGE AND LEVEL MONITORING

**MULTI-VESSEL  
INVENTORY MANAGER**

**COMPATIBLE WITH**  
ALL OF OUR SCALES  
AND SENSORS

**4-20mA OUTPUTS**  
FOR REMOTE  
MONITORING

**LIQUID LEVEL AND  
PUMP CONTROLLER**



## IT'S AN ENTIRE CHEMICAL INVENTORY MANAGEMENT SYSTEM

The Wizard 4000™ is an extremely powerful chemical inventory management system for monitoring chlorine gas, sodium hypochlorite, hydrofluosilicic acid and all other chemicals used in water treatment. The Wizard 4000 helps insure a safe process and a safe plant by providing essential information such as current chemical feed rate, how much chemical has been fed, and how much chemical remains. The Wizard 4000 can be used with any of our scales and ultrasonic sensors, easily converts any existing Force Flow hydraulic scale to a digital multi-function system and can be used with most electronic load cell based weighing systems.

## CHEMICAL INVENTORY MANAGER

Because the Wizard 4000 has four separate channels, it can be used to simultaneously monitor levels in up to four separate tanks. This means that you can monitor each tank independently as well as get the combined totals for all the tanks. The "Daily Usage" data logging function allows for easy record keeping and a "Days Until Empty" function makes it simple to anticipate tank refilling and chemical reorder points. Flexible software allows the user to monitor chemicals in Lbs, Kgs, Gallons, Liters or Percent of Full.

## CHEMICAL FLOW METER

A "Feed Rate" function allows the operator to monitor chemical feed rates, which can be alarmed or

transmitted via a 4-20 ma signal. This important feature allows early warning of dangerously low or high feed rate conditions and therefore prevents hazardous under or overdosing of chemicals to your water supply.

## LIQUID LEVEL/PUMP CONTROLLER

The Wizard provides up to four set points, each triggering dry or solid-state relays. These relays can be programmed for high or low level alarms, automating chemical transfer from bulk to day tanks or diluting chemicals down from their full strength. These features prevent the hazards of running out of chemicals or accidental overfilling of tanks.

**FORCE FLOW**

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Rev 09/20

## MODELS & ORDERING INFORMATION

**MODEL:** 4000-1 (1 Channel), 4000-2 (2 Channels)  
4000-3 (3 Channels), 4000-4 (4 Channels)

**INPUT:** 1 to 4 electronic load cells or 1 to 4 ultrasonic sensors

**OUTPUT:** Isolated 4-20mA output and up to (12) optional relays

**READOUT SPECS:** 32 character, backlit, alphanumeric LCD

**NUMERICAL DISPLAY:** 6 full digits (999,999)

**BAR GRAPH DISPLAY:** 2 lines, 16 characters per line, alphanumeric LCS display with backlighting, 0.4" characters

**DISPLAY UNITS:** lb, kg, and gallon up to 999,999

**INCREMENTS:** 1, 2, 5, 10, 20 or 50

**ZERO/TARE ADJUSTMENT:** Via keypad

**OPERATING TEMPERATURE:** 32-122 Degrees F (0-50 Degrees C)

**INPUT POWER:** 110, 220 or 240 VAC (50-60 Hz), 5 watts

**CONNECTORS:** Power: 1/2" Nylon Flex Conduit Connector  
4-20mA & Relays: 1/2" Nylon Flex Conduit Connector  
Load Cells & Ultrasonic Sensors: 1/2" Nylon Cord Connector

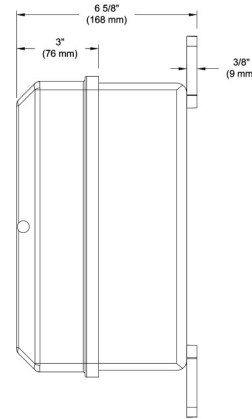
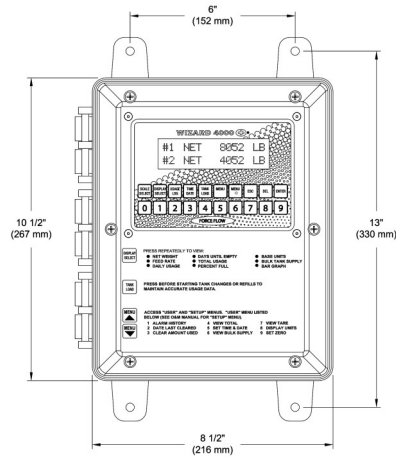
**ENCLOSURE:** NEMA 4X, UL listed structural foam molded

**APPROVALS:** CE (European standard), CSA (Meets or exceeds UL standards)

**PERFORMANCE:** Overall System Accuracy: 0.1-0.25% F.S.,

Non-linearity: <0.03% F.S., Hysteresis: <0.02% F.S., Non-Repeatability: <0.01%

F.S., Thermal Stability: <0.002/Deg F, Zero and Span



## OPTIONS



### 4-20mA OUTPUT SIGNALS

- 1 to 4 separate output signals
- Net Weight or Feed Rate
- 1000 OHMS Max per output

### LEVEL ALARMS/RELAYS

- Up to (12) per indicator
- Solid State or Dry Contact
- N.O./N.C.
- Latching/Non-Latching

### COMMUNICATIONS:

- RS232 Serial Port
- RS485 Serial Network Port

## TYPICAL SPECIFICATION FOR CHEMICAL MONITORING SCALE OR ULTRASONIC SENSOR

### SCALES

A quantity of \_\_\_\_\_ scale(s) shall be of the single load cell design. Weight shall be transferred via lever(s) to a single, NTEP approved load cell of the shear beam strain gauge type. Flexible cable shall lead from the cell to indicator allow easy remote installation of the readout. Cable length shall be \_\_\_\_\_ ft. (meters) ( 20'/6M standard) in length.

### INSTRUMENT ENCLOSURE, OUTPUTS & ALARMS

Indicator shall carry CE marking and shall be housed in a NEMA 4X, UL approved enclosure. Indicator shall have a 20 key digital keypad & ability to display 2 scales at a time on a backlit alphanumeric display. If more than 2 scales are being monitored, display shall automatically scan all scales in the system. Indicator shall have adjustable 4-20mA signals that output net weight and chemical feed rate for each scale. Indicator shall display an alarm in any of the following conditions: Low level, high level, low feed rate, high feed rate, max daily use, min daily use, supply exhausted and load cell failure. An alarm log shall store the most recent 10 alarm conditions with time and date of occurrence.

A quantity of \_\_\_\_\_ relays (up to 12 per indicator) shall be provided for remote alarm indication or transfer pump control. Indicator shall be enabled with MODBUS protocol for remote RS-485 serial communications. Indicator shall monitor \_\_\_\_\_ (1, 2, 3, or 4) channels.

Scale shall carry a Full Five (5) Year Factory Warranty. "Limited" warranties shall be considered unacceptable. Full scale accuracy shall be better than 1/4 of 1%. Scale/Ultrasonic Sensor shall be Model \_\_\_\_\_ and digital display shall be WIZARD 4000™ Indicator manufactured by Force Flow, 2430 Stanwell Drive, Concord, CA 94520 USA.

Please see individual scale bulletins for model numbers and additional information. Specifications, literature and drawings available online at [www.forceflowscales.com](http://www.forceflowscales.com)

**FORCE FLOW**