

# **AWS**

**ADVANCED WATER SYSTEMS**

## **AUTOMATIC CHLORINATION**

## **SYSTEMS DIAPHRAGM PUMPS**

- Bacteria?
- Odors?
- Cloudiness?

***AWS HAS  
THE ANSWER!***



### **Liquid Hypochlorite Injection With Diaphragm Pumps**

- Completely Adjustable
- Variable Flow Option
- Pressures to 300 psi

Also available are:

### **Liquid Hypochlorite Injection With Peristaltic Pumps**

- Self Priming
- Reliable
- Pressures to 150 psi



### **Solid Calcium Hypochlorite Feeders**

- Long Lasting Chlorine Tablets
- Precision Reliable Dosing
- Open-Stream Flow



# CHLORINATION SYSTEMS: LIQUID SODIUM HYPOCHLORITE INJECTION



**Household Bleach** is 5 1/4% Sodium Hypochlorite

**Liquid Pool Chlorine** is 12 1/2% Sodium Hypochlorite

For best results use 12 1/2% NSF certified chlorine designed for potable water; or use fresh pool chlorine, and size of system and injection rate so that you make up fresh solution once a month.

**LMI Metering Pumps:** The standard for excellence in electronic diaphragm metering pumps. Unlike cheaper pumps made from pvc or polypropylene, these units use heavy-duty, chemically resistant PVDF pump heads for very long usage between replacement. Pump 12% sodium hypochlorite with no failures. All pumps come standard with the LMI Four Function Valve for safety and ease-of-use.

Part #	LMI Model	GPD	PSI	VOLT	Price Each
P5001030	P121-352SI	5	150	120	\$424
P5001110	P122-352SI	5	150	240	\$424
P5001020	P131-392SI	10	110	120	\$431
P5001140	P132-392SI	10	110	240	\$431
P5001040	P141-352SI	14	250	120	\$441
P5001150	P142-352SI	14	250	240	\$441
P5000810	P151-392SI	24	110	120	\$450
P5000820	P152-392SI	24	110	240	\$450
P5000830	P161-362SI	48	50	120	\$467
P5000840	P162-362SI	48	50	240	\$467

## Three Sizes of Solution Tanks to Choose From:

### 10-Gallon

Pump Installs on Top



T40-0004 \$119.00

### 35-Gallon

Pump Installs on Tank Shelf for Flooded Suction



T40-0003 \$289.00

### 50-Gallon

Pump Installs on Top

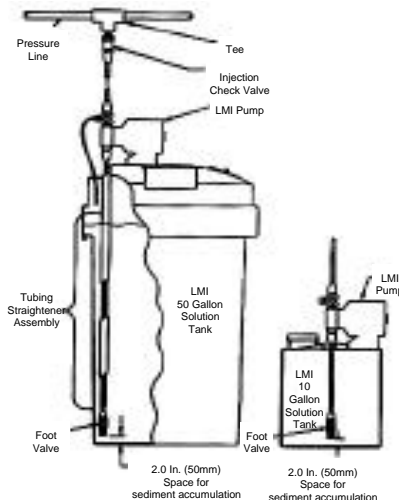


T40-0006 \$209.00

## Hundreds of Metering Pumps and Accessories For Practically Any Flow Rate Available Including:

- Proportionally Fed Systems
- Electronic Flow Meters
- Flow Computers
- Check Valves, Anti-Syphon Valves
- Static Mixers
- Electrical Mixers

## Typical Installation of Metering Pumps for Chlorination:



## How To Figure out What Size Pump to Use, and How To Set the Speed and the Stroke To Achieve Proper Dosage:

**Step One:** Determine Flow Rate of the water stream you are injecting into, in Gallons Per Minute (GPM)

**Step Two:** Determine the parts per million of chlorine you are trying to achieve (PPM).

**Step Three:** Use the formula below to compute the gallons per day and select the pump.

**Step Four:** Adjust the output of the metering pump to achieve proper dosage.

Multiply the FLOW RATE (GPM) times the Applied Dosage in Parts Per Million Desired times 1440. Then Divide by the Solution Strength being used. Household bleach is 5 1/4%, Pool Chlorine is 12%. If you dilute the solution by using 19 gallons of pure water to 1 gallon of pool chlorine, you end up with a solution strength of 0.6%. You can vary the applied dosage of chlorine by adjusting the solution strength and by adjusting the speed knob and/or the stroke knob of the metering pump. If both the speed and stroke knobs are set to 100%, then the metering pump will deliver 100% of its rated output in gallons per day. After you use the formula below to compute the gallons per day adjust the knobs to end up with the desired dosage.

$$\frac{12 \text{ GPM} \times 1.5 \text{ PPM} \times 1440}{1,000,000 \times .05 \text{ 1/4\%}} = 4.9 \text{ Gallons Per Day}$$

Divide the Gallons Per Day figure by the Rated Maximum Output of the Metering Pump: For Instance: Using Model P50-0005 which has a maximum output of 10 Gallons Per day 4.9 divided by 10 = .49 or 49% SO! You could set the metering for 49% of its rated output by adjusting the Speed Knob to 49 and the Stroke Knob to 100; or by setting the stroke to 70 and the speed to 70 because 70% times 70% equals 49%.



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