

Fluid Metering Solutions Made Simple **Blue-White**®

### **COMPANY HISTORY**



Company Founder, Ozzie King & Truck

#### Blue-White® Industries' founder, Ozzie King

(October 17, 1909 – August 11, 1998) was a true Pool Industry pioneer. In the late forties he became a successful pool builder and inventor, operating as King Blue-White Pools. In 1957, he switched the focus of the company from building to manufacturing and incorporated Blue-White Industries. In the early years of the industry, products that we now take for granted were simply not available. Ozzie King had the foresight to see what types of products were needed, and the skill to manufacture these products. He was awarded a patent on the Weir Gate Skimmer, which greatly reduced pool construction costs, and effectively cleaned pool



Company Founder, Ozzie King. circa 1923

water surfaces. This was the most important invention in the pool industry. In addition to the Weir Gate Skimmer, Ozzie developed the underwater pool light (the first underwater light approved by the City of Los Angeles), DE and Sand Filters, Air Gaps, chlorinators, and flowmeters. His F-300 Series flowmeter became the Pool Industry standard. This ingenious meter, which installs in just minutes, enables users to accurately determine actual flow rate in their pool's plumbing system. Health Departments now mandate flowmeters on all public and semi-public pools. In addition, he developed two great Chlorinators, the CHEM-FEED® C-600P, and the FLEXFLO® A-100, for which he was awarded a patent on the pump tube design. Ozzie's contributions to the Industry, both in building design and innovation, and product development and invention, are unequaled. Today Blue-White® Industries is still run by the King family.

# Blue-White®

# INDUSTRIAL PROCESS MARKETS AND APPLICATIONS:

- Industrial Water and Wastewater
- Agriculture
- Livestock
- Food & Beverage
- Cooling Tower Water Treatment
- Boiler Water Treatment
- Pulp and Paper
- Oil and Gas
- Mining

### **FLEXFLO® PERISTALTIC METERING PUMPS**



Blue-White's FLEXFLO® Series of Peristaltic Metering Pump are designed to dose precise amount of chemical; and FLEXFLO® pumps will not experience vapor lock or loss of prime. Each pump comes with built in Tube Failure Detection, which will prevent dangerous chemical spills and downtime.

## **A5** is capable of outputs up to 9 gallons per minute / 536 gallons per hour at only 75 RPM motor speed, making it incredibly energy efficient.

- Up to 80% reduced pulsation due to exclusive offset roller design and dual-channel tube assembly.
- .0302–534 GPH (.1144–2021 LPH)
- 65 PSI (4.4 bar)

#### A4 has smooth, dependable feed for applications that require high volume chemical dosing requirements.

- 5" touchscreen display, IP rated M12 connection parts, and advanced communication protocols.
- .01-158.5 GPH (.04-600 LPH)
- 125 PSI (8.6 bar)

### A3 features a bright and responsive 5" display screen that can be used with or without gloves.

- 5" touchscreen display, IP rated M12 connection parts, and advanced communication protocols.
- .001-33.3 GPH (.003-126 LPH)
- 125 PSI (8.6 bar)

#### **A2** is designed to handle the demands of a wide range of chemical injection volumes.

- Self-priming even against max line pressure and by-pass valves are not required.
- .02-21.23 GPH (.07-80.4 LPH)
- 125 PSI (8.6 bar)

#### A1 is simple to work with and simple to maintain with smooth chemical feed that will not vapor lock.

- Standardize on one pump with the wide feed range.
- .001-5.6 GPH (.002-21.2 LPH)
- 100 PSI (6.9 bar)

### **FLEXFLO® PERISTALTIC METERING PUMPS**

Choose the FLEXFLO® Capabilities Your Application Requires:



Flow Output Range	(.002 – 21.2 LPH)	(.07–80.4 LPH)	(.003–126.1 LPH)	(.04–600 LPH)	(.1884-2044 LPH)		
Turndown	2,000:1	100:1	100:1 2,500:1				
Warranty	2 YEAR						
Variable Speed DC Motor	BRUSHLESS	BRUSH	BRUSHLESS				
TFD (Pat.#7,001,153 and 7,284,964)	YES	YES	YES	YES	YES		
Maintenance Mode (Pat. #8,215,931)	NO	YES	YES	YES	YES		
Motor Reverse	NO	YES	YES	YES	YES		
Tube Info Button	NO	TIMER					
Input: Remote Start/Stop	YES	YES	YES	YES	YES		
Input: 4-20mA	YES	YES	YES	YES	YES		
Input: Frequency (Pulsed)	NO	YES	YES	YES	YES		
Output: 4-20mA	YES	Optional	YES	YES	YES		
Output: Pulse	NO	NO	YES	YES	YES		
Password Protect (PIN)	NO	NO	YES	YES	YES		
Industrial Ethernet (IP)	NO	NO	YES	YES	YES		
Profibus	NO	NO	YES	YES	YES		
Modbus-TCP	NO	NO	YES	YES	YES		

**FLEXFLO® PERISTALTIC PUMPS** have smooth, quiet pumping action and deliver accurate amounts of chemical to your system. Four FLEXFLO® models are offered featuring a broad range of output rates, electronics options and features. If you don't see the FLEXFLO® pump that meets your system requirements, please contact the factory. Blue-White® specializes in meeting OEM requirements.

### **FLEXFLO® APPLICATIONS INCLUDE**

Chemical Metering Chlorination Chloramination Fluoridation Polymer Injection Pulp and Paper Slurries Printing Inks Oil Based Fluids Gaseous Fluids Shear Sensitive Fluids

Caustics Chemical Slurries Food and Beverage

### **CHEM-FEED® ENGINEERED SKID SYSTEMS**



### **CHEM-FEED®**

### Simplex, Duplex, and Triplex Plastic Skid System

The lightweight Plastic Skid Systems are equipped with all necessary components for hassle-free ordering and drop-in-place installation. The durable plastic skids feature rugged, chemical resistant Polyethylene construction with single, duplex, and triplex configurations offered.



### **CHEM-FEED®**

# Simplex and Duplex Wall Skids

Piping options such as, PVC, CPVC, PVDF, and Chem Proline® (PE), for the Wall Mount Skid System make it strong and lightweight. The skid systems are chemical resistant, solvent or fusion welded for strength, and designed for small spaces.

# CHEM-FEED® MULTI-DIAPHRAGM METERING PUMPS



Exclusive hyperlink Drive Technology allows for smooth chemical feed. The Dual-Diaphragm Pumps with full stroke technology will not lose prime or vapor lock with off-gassing chemicals such as Peracetic Acid and Sodium Hypochlorite.

#### CD3

- .05-52.6 GPH (.19-199 LPH)
- 145 PSI (10 bar)

#### CD1

- .004-8.5 GPH (.015-32.1 LPH)
- 150 PSI (10.3 bar)

# CHEM-FEED® DIAPHRAGM METERING PUMPS







**CHEM-FEED® C1500N** 



CHEM-FEED® Single Diaphragm Metering Pumps ensure precision chemical feed while providing excellent chemical resistance and dependable service.

#### **C3**

- .3-40.0 GPH (.1-154 LPH)
- 150 PSI (10.3 bar)

- .02-16.5 GPH (.09-62.5 LPH)
- 175 PSI (12 bar)

- 1-21.5 GPH (4-81.4 LPH)
- 125 PSI (8.6 bar)

#### C-1500

- .2-9.5 GPH (.5-.36 LPH)
- 125 PSI (8.6 bar)

# CHEM-FEED® DIAPHRAGM METERING PUMPS

Choose the CHEM-FEED® Capabilities Your Application Requires:



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Flow Output Range	.02-16.5 GPH (.09-62.5 LPH)	.3–40 GPH (.1–.154 LPH)	.004-8.5 GPH (.015-32.1 LPH)	.05-52.6 GPH (.2-199 LPH)		
Turndown	100:1	100:1	1,000:1			
Warranty	2 YEAR					

Variable Speed DC Motor	BRUSH	BRUSH	BRUSHLESS	
Dia-Flex® PVDF Single-layer Diaphragm	YES	YES	YES	YES
DFD (Diaphragm Failure Detection)	YES	YES	YES	YES
Protective LCD Snap-on Cover	YES	YES	YES	NO
Maintenance Mode	NO	NO	NO	YES
Input: Remote Start/Stop	YES	YES	YES	YES
Input: 4-20mA	YES	YES	YES	YES
Input: Frequency (Pulsed)	YES	YES	NO	YES
Output: 4-20mA	NO	Optional	YES	YES
Proportional Dosing	NO	NO	NO	YES
Password Protect (PIN)	NO	NO	LOCKOUT BUTTON	YES

**CHEM-FEED® DIAPHRAGM METERING PUMPS** provide superior chemical resistance, precision chemical metering capabilities, and are designed to provide excellent service in a wide range of applications.

#### **CHEM-FEED® APPLICATIONS INCLUDE**

Chemical Metering
Chlorination
Chloramination
Fluoridation
Polymer Injection

Pulp and Paper Slurries Printing Inks Oil Based Fluids Gaseous Fluids Shear Sensitive Fluids

Caustics Chemical Slurries Food and Beverage

### **EXCLUSIVE PATENTED PARTS**



# Flex-A-Prene® Heavy-Duty Peristaltic Pump Tubing

Flex-A-Prene® is our single and multi-channel pump tube assembly designed by Blue-White® exclusively for FLEXFLO® Peristaltic Dosing Pumps. Flex-A-Prene® is engineered for optimum performance, including up to four times longer service than other pump tube assemblies.



### **Exclusive Diaphragms**

Blue-White's® PVDF diaphragms, used in our CHEM-FEED® Diaphragm type Chemical Metering Pumps, are manufactured in our factory to ensure a quality product. DiaFlex® features an innovative single layer design that exhibits zero breakdown or delamination. DiaFlex® is designed to last the life of the pump which greatly reduces downtime and maintenance.

The PVDF composition of both the pump head itself and the diaphragm ensures excellent chemical compatibility. DiaFlex® is available in three sizes to accommodate varying flow rates.



# **Quick Disconnect Fittings for Chemical Feed Pumps**

Blue-White's Quick Disconnect Fittings can stop chemicals from pouring or spraying from your pump during maintenance. These Quick disconnect fittings are a toolless and quick way to disconnect a metering pump that will save time and money.

### **EXCLUSIVE PATENTED PARTS**



### **Star Tanks**

The Star System Complete Metering System is available in 7, 15, and 30 gallons. The Star Systems have an easy fill lid with three lid positions: open, closed and vented. The compact and efficient tanks are constructed of natural polyethylene with U.V. inhibitors, and 0.30" thick walls for stability, strength and superior chemical resistance.



### **Foot Valves/Injector Fittings**

Foot Valves are used with all Blue-White® diaphragm pumps. The Foot Valve with Filter Strainer prevents loss of prime, and also restricts larger particles from entering into the metering pump, helping to avoid clogs. Injection fittings allow injection directly into piping and also act as a check valve.



### **Blue-White**°

# SONIC-PRO ULTRASONIC FLOW METERS

# **SONIC-PRO MS6**Ultrasonic Flow Meter

The MS6 Ultrasonic Flow Meter accurately measures chemical feed from your chemical metering pump using the latest Ultrasonic technology. The expertly engineered design offers a wide flow range from 10 to 10,000 ml/min and has a low pressure drop of less than 1 PSI.

### **VARIABLE AREA FLOW METERS**



# **Acrylic** Variable Area Flow Meters

Acrylic Variable Area Flow Meters are durable, highly polished, one piece meter bodies annealed for strength and chemical resistance and are suitable for direct sunlight. Great for dependable flow monitoring.

# **Polysulfone** Variable Area Flow Meters

Polysulfone Variable Area Molded Flow Meters resists high temperatures and pressures. Models available with no metal in the fluid path for use in UltraPure applications or ideal for corrosive environments such as Deionized Water applications.



### Blue-White

# BW DIGI-METER® PADDLEWHEEL FLOW METERS



### **BW DIGI-METER® F-1000 and F-2000 Paddlewheel Flow Meters**

The F-1000 and F-2000 Flow Meters are accurate, easy to install, and easy to operate. The F-1000 Flow Meter is sensor mounted on a pipe fitting and battery operated. The F-2000 has sensor, pipe, panel, or wall mount options available and are AC/DC transformer or battery operated (RT models only).

### **CASE STUDIES**

# **Assisting with Water Reclamation**

Stone Brewing located in San Diego, California chose Blue-White's® FLEXFLO® A2 Peristaltic Dosing Pumps to successfully assist with pumping sodium hypochlorite for use in the membrane bioreactor filter backwashes, sulfuric acid prior to reverse osmosis, and sodium hydroxide to bring reclaimed water to the correct pH.

The FLEXFLO® A2 Dosing Pumps were not only successful with assisting with the purification of the brewery's wastewater, but they were easy to install and operator friendly.



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# Biological Build-Up Challenge in Industrial Reuse Application

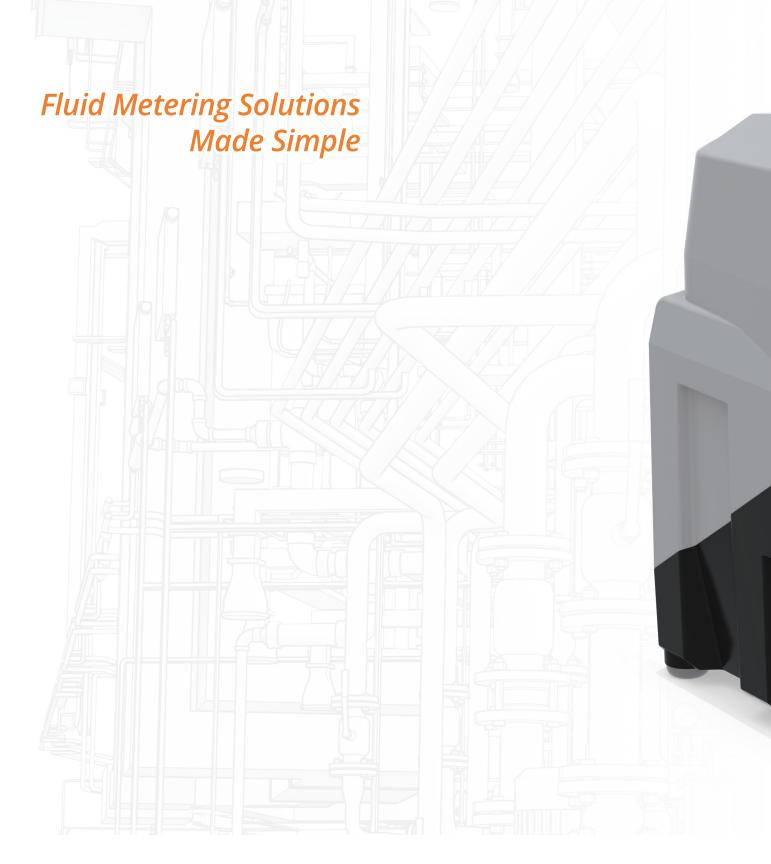
An Orlando, Florida Energy Center injects sodium hypochlorite into reuse water to prevent biological build-up within water tubes in a condensing turbine where thermal energy of steam is converted into mechanical power, which is converted into electric power by a generator. The Energy Center was pleased with the FLEXFLO® A3 Peristaltic Dosing Pumps and the pump's ability to inject gaseous chemicals against moderate to low pressures. The CHEM-FEED® Skid System used offered a compact, efficient, and high quality solution that was a less expensive and easy to install as opposed to purchasing components separately and using an in-house engineering team to design and assemble.

# **Dosing Pumps Instrumental** in Agricultural Application

A 22-acre farm was searching for a better way to deliver fertilizer because the nitrate portion of the fertilizer was highly susceptible to leaching. The farm decided the more efficient way to deliver the fertilizer was to use a subsurface drip irrigation system to dose the fertilizer directly into the crop's water supply.

The farm chose the CHEM-FEED® C2 Diaphragm Metering Pump to precisely meet the dosing requirements. Because the C2 was light and transportable. It was easy to move between several fields of crops.





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