

## Blue-White A100NA Peristaltic Metering Pump

- A. METERING PUMP – Shall be a positive displacement, peristaltic type tubing pump with a fixed speed motor, non-spring-loaded roller assembly located in the pumphead, integral tube failure detection system, and flexible tubing with attached connection fittings.
1. There shall be no valves, diaphragms, springs, or dynamic seals in the fluid path. Process fluid shall contact the pump tubing assembly and connection fittings only.
  2. Capable of self priming at the rated maximum pressure.
  3. Capable of running dry without damage.
  4. Suction lift shall be 30 feet of water.
  5. Pump shall have a one-year manufacturer's warranty that includes chemical damage to the pump head and roller assembly caused by a ruptured pump tube assembly.
- B. PUMPHEAD – Shall be a single, unbroken track with a clear removable cover.
1. Hastelloy C-276 tube failure detection sensors shall be wholly located in the pumphead. Tube failure detection system shall not trigger with water contact. Float switch type switches shall not be used. Process fluid waste ports or leak drains shall not be provided.
  2. Squeeze rollers shall be directly coupled to a one-piece Valox 420 SEO rotor. Three polymeric squeeze rollers located 120 degrees apart shall be provided. The roller diameters and occlusion gap shall be factory set to provide the optimum tubing compression; field adjustment shall not be required. Spring-loaded or hinged rollers shall not be used.
  3. Rotor assembly shall be installed on a D-shaped, chrome plated motor shaft and removable without tools.
  4. For tubing installation and removal, rotor assembly shall be rotated by the motor drive. Hand cranking of the rotor assembly shall not be required.
  5. Pump head and tubing compression surface shall be corrosion resistant Valox 420 SEO thermoplastic.
  6. The pump head cover shall be clear, acrylic thermoplastic with an integral bearing fitted to support the overhung load on the motor shaft.
  7. Cover shall be positively secured to the pump head using three thumb screws. Tools shall not be required to remove the pump head cover.
- C. PUMP TUBE ASSEMBLY
1. To ensure pump performance and accuracy, only tubing provided by the manufacturer is acceptable.
  2. Pump tube shall be assembled to connection fittings of PVDF material.
  3. Connection fittings shall be permanently clamped to the tubing with stainless steel clamps. To prevent tubing misalignment and ensure accuracy, fittings shall insert

into keyed slots located in the pump head and secured in place by the pump head cover. Fitting shall not rotate when installed.

4. Connection fittings shall accept 1/4" ID x 3/8" OD flexible tubing.
5. Tube sizes and connections shall be measured in inches.
6. The following tube sizes shall be available:

Tube Number	Tubing Material	Output / PSI @ 14 RPM	Output / PSI @ 30 RPM	Output / PSI @ 45 RPM	Output / PSI @ 60 RPM
A1-4T	Flex-A-Prene	2.3 GPD / 100	4.9 GPD / 100	8.0 GPD / 100	9.5 GPD / 75
A1-6T	Flex-A-Prene	6.8 GPD / 100	16.0 GPD / 100	24.0 GPD / 100	30.1 GPD / 75
A1-7T	Flex-A-Prene	21.7 GPD / 50	52.5 GPD / 50	76.1 GPD / 50	96.1 GPD / 50

D. DRIVE SYSTEM – Shall be factory installed and totally enclosed in a NEMA 3R, outdoor rated enclosure.

1. Motor
  - a. AC gearmotor rated for continuous duty.
  - b. Motor shall include overload and thermal protection.
  - c. Four maximum RPM gear ratio options shall be provided; 14 RPM, 30 RPM, 45 RPM, and 60 RPM. (*Engineer to specify*)
  - d. Shall run at a fixed speed during on-time cycle.
2. Enclosure
  - a. Material shall be injection molded Valox 420 SEO.
  - b. Enclosure shall be rated NEMA 3R.
  - c. Provided with four slots in the enclosure base for shelf mounting and two slots in the rear panel for wall mounting. Stainless steel mounting hardware shall be provided.
  - d. Provide a three foot length power cord with NEMA 5/15 U.S. 115VAC attachment plug. Optional: power supply cord with NEMA 6/15 U.S. 230 VAC attachment plug, or CEE 7/VII (EUROPE) 220V50Hz attachment plug. (*Engineer to specify*)
3. Control Circuitry
  - a. Provide front panel user dial knob for cycle timer on time adjustment and power on/off and TFD system reset switch. Dial knob shall be capable of adjusting the pump's on time from 5% to 100% of the 60 second operating cycle.
  - b. To prevent tampering, the front panel dial knob and power switch shall be wholly enclosed by a clear acrylic door secured by two slide clamps.
  - c. Provide one open collector alarm output rated at 50mA dc maximum sinking current at 6-30 VDC. Alarm output shall sink to ground when the Tube Failure Detection (TFD) system triggers.

E. SAFETY

## **SPEC\_A100NA\_11.20.2018**

1. The pump shall be listed to UL standard 1081 – Electric Swimming Pool Pumps, Filters, & Chlorinators; CSA standard CAN/CSA-C22.2 No. 108- Liquid Pumps; and NSF/ANSI Standard 50 - Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities.
2. Tube Failure Detection (TFD) system sensors shall be wholly located in the pumphead. TFD system will stop the pump within three seconds of leak detection. To prevent false alarms due to rain, wash-down, condensation, etc., tube failure detection system shall not trigger with water contact. Process fluid waste ports or leak drains shall not be provided.

### **F. MANUFACTURER**

1. The pump shall be Flex-Flo Model A-100NA manufactured in the U.S.A. by Blue-White Industries.