



ADD*FLO Progressive Cavity Pumps
Operation & Maintenance Manual

Warning: Read instructions carefully before attempting to install, operate or service pumps. Retain instructions for future reference.

Introduction

The ADD*FLO pumps are progressive cavity positive displacement pressure pumps that can handle liquids from zero to 100,000 centipoise. This unique design pump can meter or transfer liquids and is especially effective with high viscosity materials or those with thixotropic flow characteristics.

The drum pumps come in standard sizes to fit the most common 30 & 55 gallon containers as well as custom sizes for totes. Drum pumps enter the container through the two-inch bung opening and extend to the bottom of the container. The horizontally mounted pump pulls material from the container via tubing. ADD*FLO pumps can accommodate many control configurations with optional adapters.

Specifications

General Construction: Mild Steel

Drive Shaft: Stainless Steel with BUNA-N rotary seals

Pumping Element: Hardened steel chrome plated and BUNA-N

Rotation: Sizes 1, 2 and 3 are Counterclockwise
 Sizes .05 and .25 are Clockwise

Inlet Port: 3/4" NPT

Outlet Port: Size 1 and smaller: 1/4" NPT
 Size 2 and 2: 1/2" NPT

Flow Rates:

Size .05 = 0.23 ml/Rev	200 PSI	Accuracy +/- 0.01 Grams
Size .25 = 0.61 ml/Rev	200 PSI	Accuracy +/- 0.01 Grams
Size 1 = 2.12 ml/Rev	200 PSI	Accuracy +/- 0.01 Grams
Size 2 = 9.84 ml/Rev	200 PSI	Accuracy +/- 0.01 Grams
Size 3 = 30.21 ml/Rev	200 PSI	Accuracy +/- 0.01 Grams

Installation

Drum Pump:

1. Unscrew and remove the containers 2” bung plug.
2. Lower the pump body through the 2” bung opening and rest on the bottom.
3. Engage the threaded section of the slider in the bung threads; turn until hand tight. Lock with the thumb screw.
4. Locate the locking hole in the side of the pump body. Loosen the thumb screw in the collar of the motor mount. Place the drive module on the pump body making sure that the pump is fully seated in the motor mount. Tighten the thumb screw into the locking hole.
5. Attach the outlet (delivery) tube to the outlet port (1/4” NPT) on the top of pump. This must be a secure connection to withstand pressure from the pump.

Horizontal Pump:

1. Install the pump into the motor mount with the outlet port pointing up. Make sure that the pump is fully seated in the motor mount and tighten the thumb screw.
2. Attach the inlet (supply) tubing to the inlet port (3/4” NPT) at end of the pump (opposite of the motor mount). This connection **MUST** be airtight. Air leaks will cause irregularities in the amount of material being pumped.
3. Attach the outlet (delivery) tube to the outlet port (1/4” or 1/2” NPT) on the top of pump. This must be a secure connection to withstand pressure from the pump.

General

When not in use, seal inlet and outlet ports completely to prevent hardening of the colorant. To store pumps for a longer period, follow cleaning instructions.

DO NOT RUN PUMP DRY.

This will result in catastrophic failure.

Cleaning Instructions

WARNING: The use of any solution other than those outlined below or complete disassembly of the pump voids the warranty.

Simple Cleaning:

1. Run the pump in reverse removing as much liquid color as possible.
2. Flush the pump (in reverse) with industrial grade mineral oil until fluid looks clean.
3. Prior to connecting to processing equipment, pump the excess cleaner into a dump bucket until the new material comes out of the delivery tube.
4. To clean more thoroughly, see below.

Thorough Cleaning:

WARNING: Extra care must be taken not to damage the mechanical seal during cleaning. Complete disassembly IS NOT RECOMMENDED.

1. Run the pump in reverse removing as much liquid color as possible. Disconnect from controller.
2. Place the pump in a container with warm water or under a flow of warm water. A mild detergent such as Simple Green may be added to help disperse the colorant. Completely clean the outside surfaces of the pump body.
3. Turn the stator assembly counter clockwise and unscrew from the rotor.
4. Clean the interior of the stator assembly by flushing with the mild detergent solution. At this stage ONLY, a bottle brush may be used. Rinse thoroughly with clear water.
5. Clean the drive shaft and rotor. Flush out the inside of the housing with the mild detergent solution. **DO NOT** use brushes, etc. inside the housing cavity as this can damage the seal. Rinse with clear water.
6. Lubricate the rotor with liquid soap or industrial grade mineral oil. **NEVER** store pump with water inside.
7. Slide rotor through color tube and screw clockwise into stator.
8. Prior to connecting to processing equipment, pump the excess cleaner into a dump bucket until the new material comes out of the delivery tube.

Troubleshooting

Material is not pumping consistently

- Check supply container, make sure material is present
- Check inlet connections for air leak

Pump will not turn

- Check to make sure material has not hardened inside
- If incorrect solution was used for flushing, rotor may be swollen. Return unit for repair

Pump turns but will not pump

- Possibly a broken shear pin or worn rotor. Return unit for repair

Pump leaks at motor coupling

- Mechanical seal has been compromised. Return unit for repair

Warranty and Factory Service

Tuskin Equipment Corporation warrants its products against defects in materials and workmanship. If a failure results from such defects within 90 days of Customer delivery, Tuskin will, at its option, repair or replace the defective unit free of all charges except for special shipping charges (UPS ground is standard). Tuskin will replace defective parts for a period of 5 years from the date of customer delivery (standard labor and shipping charges apply). See your Tuskin warranty disclosure for details.

All in-warranty and service returns must be accompanied with a Tuskin Return Authorization. For questions or to obtain a Return Authorization, contact:

Tuskin Equipment Corp.
1-800-887-5461