

# HyFlo Valve

High Volumes & Flow Rates for Mid-to-High Viscosity & Abrasive Fluids

**Applications that require fluids in high volumes or of a high viscosity** require a diversion from the standard dispense pump. The HyFlo dispense pump is designed to push large volumes of mid-to-high viscosity and abrasive fluids at high flow rates.

The HyFlo pump is designed with a large diameter, aggressive, double helix auger made from carbide that stands up to abrasive fluids. Depending on volume requirements, varying depths of groove in the auger are available. The auger can be interchanged at any time. For applications with abrasive fillers, the **auger can be customized to avoid binding, shearing, and wear**. Customization consists of analyzing the filler size and applying an appropriate diameter reduction to accommodate the fillers.



The auger is rotated by a high RPM motor with an encoder for precise control. If the pump is dispensing a line or type of area fill, the pump is programmed via pump speed in encoder counts/second. In the event a dot is being dispensed, the number of counts are also defined.

For applications where the fluid viscosity exceeds 100,000 cps, the high torque version is recommended. A gearbox increases torque and allows it to plow through the thickest of fluids without difficulty. The **optional body heater helps reduce the viscosity of some fluids**.

Fluid is fed to the auger cartridge by computer controlled air pressure. Automatic control is precise and supplies the correct amount of fluid to the cartridge without over or under-pressurizing.

Fluid is delivered to the substrate by **precision nozzles designed for maximum flow rate**. At the entrance



to the nozzle, a larger than normal diameter catches the fluid and delivers it through the length of the tube to the desired ID. This design **greatly reduces pressure build-up and improves flow rate**.



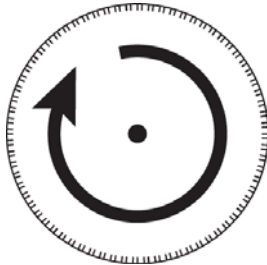
Nozzle sizes start at 13G and are available for most common gauge sizes.

**Cleaning the HyFlo pump is very easy.** The auger and cartridge assembly are held in the pump by a thumb screw and simple lever. Once the auger and cartridge are removed and disassembled, both parts can be cleaned easily with conventional cleaning items or placed in an ultrasonic cleaner.

# VALVE CONTROL TECHNOLOGY

## Valve motion controlled via FLOWare® software

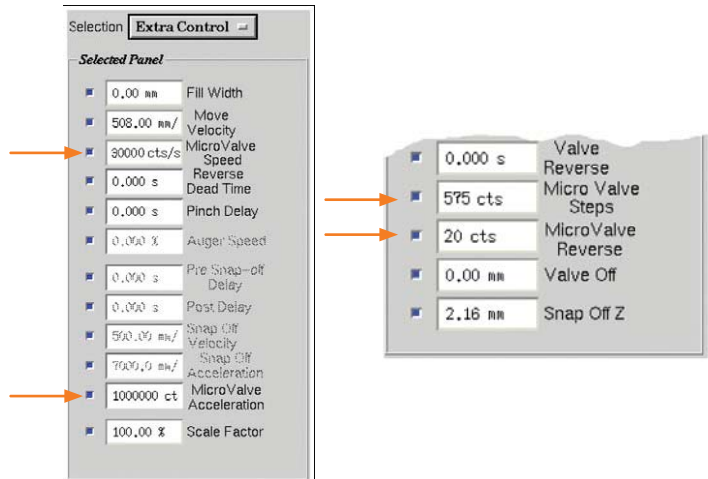
- Valve is equipped with an 8,000 count rotational encoder
- Allows for accurately controlled rotational movement of the auger screw



8,000 Counts per Revolution

## FLOWare® software controls all aspects of valve motion

- Acceleration and deceleration
- Rotational speed via counts/second



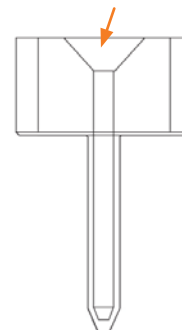
## Many needle sizes and types are available for specific dispense requirements

- Precision taper tips for low material-to-needle surface tension
- Slim cut tips for underfill minimize distance from die or CSP
- Needles feature a large, constant diameter material path for enhanced dispense capability



HyFlow Needles

## High Flow Material Pathway



Final Dispense Diameter only at tip