

## Volumetric Screw Feeder Application

The Model 100-V1 is a screw feeder designed to volumetrically deliver dry materials into a process at varying rates by changing the speed of the auger.

### Theory of Operation

The Model 100-V2 is supplied with a variable speed drive that allows the user to adjust the percentage of drive output to a rotating auger style discharge. The auger draws material out of the integral storage hopper. An overwind helix, concentric to the auger, conditions the material and serves as an agitator.

### Materials of Construction

- 304 Stainless Steel
- All Welds Continuous TIG

### Hopper

- 5.0 Ft<sup>3</sup> Volume
- Leveling Feet

### Discharge

- 1.5" to 3.0" Diameter Helix, Progressive Pitch
- 304 Stainless Steel Spout, 8" Long
- Material Conditioner/Agitator by Concentric Overwind Helix  
(Note: Overwind Does Not Have Separate drive. It Rotates at Same RPM As Helix.)

### Standard Drive Components

- 1.00 HP DC, TEFC Motor, 1750 RPM
- Right-Angle Gear Reducer, 10:1 Reduction (Standard)

### Volumetric Throughput

- 0.19 to 128.8 Ft<sup>3</sup>/Hr (See Chart).

### Control

- PWM (Pulse Width Modulated) Motor Speed Controller
- Simple User-Friendly Interface
  - LED Status Indicators
  - Start/Stop Switch
  - Potentiometer Speed Control 0-100%
- NEMA 4X, IP-65 Enclosure
- Two and Three Wire Start/Stop
- Remote Analog Setpoint Input (Optional)
  - Remote/Local Switch

### Turndown

- 60:1 from Maximum Capacity with DC Motor/PWM Drive
- 15:1 from Maximum Capacity with AC Motor/VFD

### Accuracy

- ± 1.0 by Volume, ± 3.0 by Weight

### Standard Power Requirements

- 115/230 Volts, 1 Phase, 60 Hertz
- 15 Amp Service

### Installed Weight

- 150 Lbs (68 Kg) Basic Configuration

### Available Options

- 316 Stainless Steel Construction
- Hopper Vibrator
- Lift Off Cover with Handle
- Bolt-On Hopper Cover with Infeed and Vent Connection Stubs
- Spout Extensions
- Hazardous Area Electrical Components
- Non-Stick Coatings
- On-Off Cycle Timer Control
- Glass Beaded Finish
- Tachometer for 100:1 Turndown

### Available Accessories

- Loss-in-Weight Conversion Kit
- Bag Loading Hopper
- Dust Collector
- Feeder Support Stands
- Feeder Extension Hoppers
- Dissolver Tanks and Mixers

**THEORETICAL FEED RATES**

(PROGRESSIVE PITCH HELIX  
 RUNNING WITH AN  
 OVERWIND MATERIAL CONDITIONER)

HELIX DIAMETER IN INCHES	FEED RATE RANGE IN Ft <sup>3</sup> /Hr
1.5 (38.1 MM)	0.19 – 11.8 (0.0054 - 0.3341 M <sup>3</sup> /Hr)
2.0 (50.8 MM)	0.45 – 36.3 (0.0127 – 1.0280 M <sup>3</sup> /Hr)
2.5 (63.5 MM)	1.32 – 74.8 (0.0374 – 2.1181 M <sup>3</sup> /Hr)
3.0 (76.2 MM)	1.70 – 123.8 (0.0481 – 3.5056 M <sup>3</sup> /Hr)

