

Volumetric Screw Feeder Application

The Model 25-12 is a LOW to MEDIUM capacity screw feeder designed to volumetrically deliver dry chemicals into a process at varying rates by changing the speed of the auger.

Theory of Operation

The Model 25-12 is supplied with a local control variable speed drive that allows the user to adjust the percentage of drive output from 0-100% of feedrate capacity. Chemicals are discharged via a rotating auger that meters material from the internal storage hopper. Control can be administered remotely via an analog signal isolator



Materials of Construction

- Carbon Steel Construction, 11 Gauge Base and Ends, 14 Gauge Hopper Section
- Universal Primer and Beige Epoxy Paint
- All Welds Continuous TIG

Hopper

- 1.75 Ft³ Volume

Discharge

- 3.0" or 4.0" Diameter Open Spiral Helix, 316 Stainless Steel, Progressive Pitch (Center Rod and End Bearing for Some Materials)
- Cast Iron Spout

Standard Drive Components

- 0.25 HP TEFC DC Motor, 90 V Armature, Permanent Magnet
- Direct Coupled, Dual Range Gear Reducer

Volumetric Discharge Range

- 0.08 to 72 Ft³/Hr (See Chart on Back Page)

Standard Control Panel

- Merrick XTRA® Variable Speed DC Motor Controller, PWM Rated
- Start-Stop Switch
- Single Potentiometer, 0-100 % Speed Control
- 60:1 Speed Range
- Feeder Mounted
- NEMA 4X Enclosure

Accuracy

- ± 1.0 % by Volume, ± 3.0 % by Weight

Standard Power Requirements

- 115/60/1 VAC, 15 Amps

Weight

- 260 Lbs (118 Kg) without Control Panel

Available Options

- 316 Stainless Steel Construction
- Electro-Mechanical Vibrator Agitation
- Diaphragm Flex Wall Paddle Agitation
- Bolted and Lift-Off Hopper Covers
- Hazardous Area Electrical Components
- Extension Hoppers
- Level Alarms
- Non-Stick Coatings for Helix and Spout
- 4-20 mA Signal Isolator with Hand-Off-Auto Switch for Remote Control
- Remote Mounted Control Panel
- 0-100% Potentiometer for Dosage
- Vibrator Cycle Timer with Hand-Off-Auto Switch
- Day/Night Timer with Separate Potentiometers for Day and Night Control
- 180 VDC or TENV DC Motor

Note:

When Vibrator Controls or Day/Night Timer are Required, Control Panel is NEMA 4X FRP.

Feedrate Capacity

DRIVE CODE	RPM	3" (76 MM) DIA. HELIX	4" (102 MM) DIA. HELIX	3" HELIX IN A 5" SPOUT
AA	1.9	0.08 FT ³ /HR (0.002 M ³ /HR)	1.9 FT ³ /HR (0.053 M ³ /HR)	1.4 FT ³ /HR (0.040 M ³ /HR)
AB	3.8	1.5 FT ³ /HR (0.042 M ³ /HR)	3.8 FT ³ /HR (0.108 M ³ /HR)	2.8 FT ³ /HR (0.079 M ³ /HR)
AC	5.7	2.3 FT ³ /HR (0.056 M ³ /HR)	5.7 FT ³ /HR (0.161 M ³ /HR)	4.3 FT ³ /HR (0.122 M ³ /HR)
AD	7.6	3.0 FT ³ /HR (0.085 M ³ /HR)	7.6 FT ³ /HR (0.215 M ³ /HR)	5.7 FT ³ /HR (0.161 M ³ /HR)
AE	9.5	3.8 FT ³ /HR (0.108 M ³ /HR)	9.5 FT ³ /HR (0.269 M ³ /HR)	7.2 FT ³ /HR (0.203 M ³ /HR)
BA	19.0	7.6 FT ³ /HR (0.215 M ³ /HR)	19.0 FT ³ /HR (0.538 M ³ /HR)	14.0 FT ³ /HR (0.396 M ³ /HR)
BB	38.1	15.0 FT ³ /HR (0.425 M ³ /HR)	38.0 FT ³ /HR (1.08 M ³ /HR)	28.0 FT ³ /HR (0.793 M ³ /HR)
BC	57.5	23.0 FT ³ /HR (0.651 M ³ /HR)	57.0 FT ³ /HR (1.61 M ³ /HR)	43.0 FT ³ /HR (1.22 M ³ /HR)
BD	76.6	30.0 FT ³ /HR (0.850 M ³ /HR)	76.0 FT ³ /HR (2.15 M ³ /HR)	57.0 FT ³ /HR (1.61 M ³ /HR)
BE	38.0	38.0 FT ³ /HR (1.08 M ³ /HR)	95.0 FT ³ /HR (2.69 M ³ /HR)	72.0 FT ³ /HR (2.04 M ³ /HR)

