

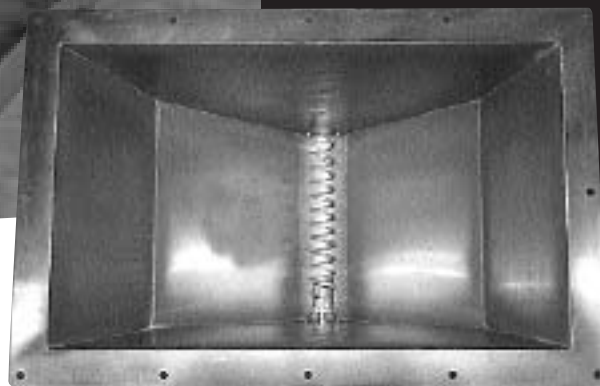
# VF-100

## *Volumetric Helical Screw Feeder for Dry Chemicals*



### **Advantages**

- Rugged direct drive for reliable operation
- Feed rates from 0.04 to 17 cubic feet/hour
- Accurate - feed rates controlled via electronic SCR speed control
- Reliable - no external pulleys, belts, chains, or gears
- Stainless steel construction for high corrosion resistance and long life
- Low maintenance
- No lubrication required
- Gravimetric control option
- Unique two-year warranty



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VF

*Your Source for Precision Process Solutions*



# VF-100 *Volumetric Helical Screw Feeder for Dry Chemicals*

With the Eagle Microsystems VF-100 Volumetric Feeder you get all the features you need, plus much more. Compared to other feeders, the VF-100 provides more of what you want: better accuracy ... higher reliability ... longer life ... more durable construction - and less of what you don't: maintenance - no lubrication, greasing or oiling is required ... no belts, gears, sprockets, or chains to maintain. The VF-100 is simple, reliable and hassle-free ... and warranted for a full two years.

VF-100 Volumetric Feeders are designed specifically to meet the requirements of the water and wastewater treatment industry, and finds application as well in the chemical, pulp and paper, and other industries - providing accurate, reliable dry chemical feed in even the harshest environments.

Once you look at the features and advantages of the VF-100 you'll agree that there isn't a better-designed feeder on the market.

## **Rugged direct drive mechanism for reliable operation**

The VF-100 uses a direct-drive, variable speed, TENV dc gear motor for simple, reliable, dependable operation. No special provisions are required when feeding potentially incandive chemicals such as carbon.



## **Accurate, reliable feed rate control**

Maximum feed rates from 0.04 to 17 cubic feet per hour are further controlled by varying the speed of the motor using a state-of-the-art electronic SCR speed control, resulting in 2% or better accuracy with free flowing materials. A 30:1 turndown provides a wide range of speeds for the selected drive, while maintaining required torque throughout the operating/feed range. And should there ever be a clog of obstruction, the current limiting circuitry will turn off the unit before any damage occurs.

The motor drive is directly linked to the feed screw. This results in smooth and continuous material flow.

## **Stainless steel construction**

All stainless steel construction in critical areas - hopper, base, feed screw, and trough - results in long life and reliable operation.

## **No greases, oils, or other lubricants required**

The use of durable plastic bearings and bushings eliminates the need for greases, oils, or other lubricants. This means no contamination of your dry chemicals, and no clumps or clogs to deal with, for cleaner operation with minimal maintenance.

## **Sensible, straightforward construction**

All components are easily accessible and, if necessary, can be replaced with a minimum of disassembly using common wrenches and hand tools.



## **Wide range of control options**

- Local or remote control of feed rate. The controller, housed in a rugged NEMA 4X enclosure, can be mounted on the unit or remotely for more convenient access and control.
- Optional remote 4-20 mA dc or digital speed control. Ideal for flow pacing, the speed control provides continuous drive control from a remote signal.
- Scale option using a reliable Eagle Microsystems scale and controller provides gravimetric control for material feed by weight or by demand.
- Contact closures available in controller unit to permit starting and stopping of feeder from a remote location.

### Choices of feed screws

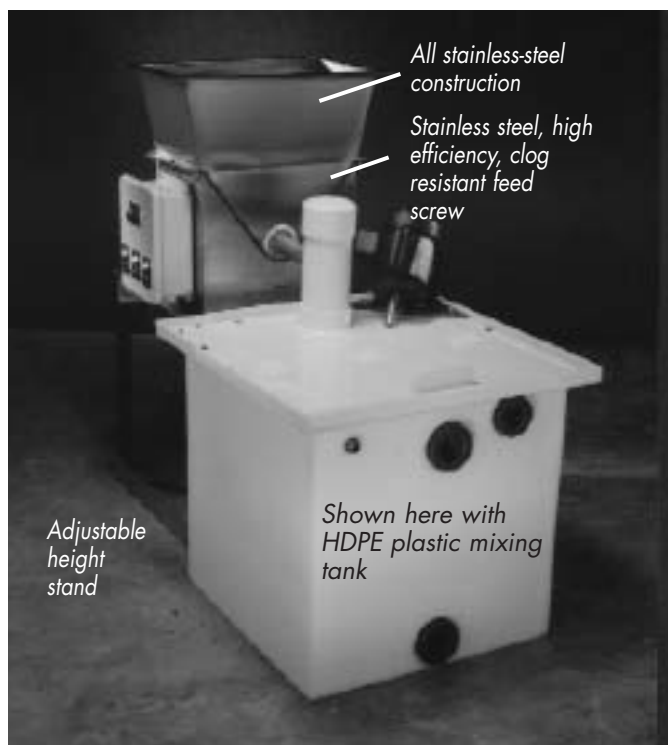
Choose from an extremely rugged, 316 stainless steel, solid shaft feed screw or an open helical design. Screws are available in 3/4-inch, 1 1/2-inch and 2 1/2-inch. Other sizes are also available.

### Optional Mixing tanks for reliable, simplified solution makeup

Mixing tanks are available in configurations and materials to meet your specific needs. Select from HDPE plastic or all stainless steel, with downspout, mixer, and other useful accessories in the configuration that matches your application.



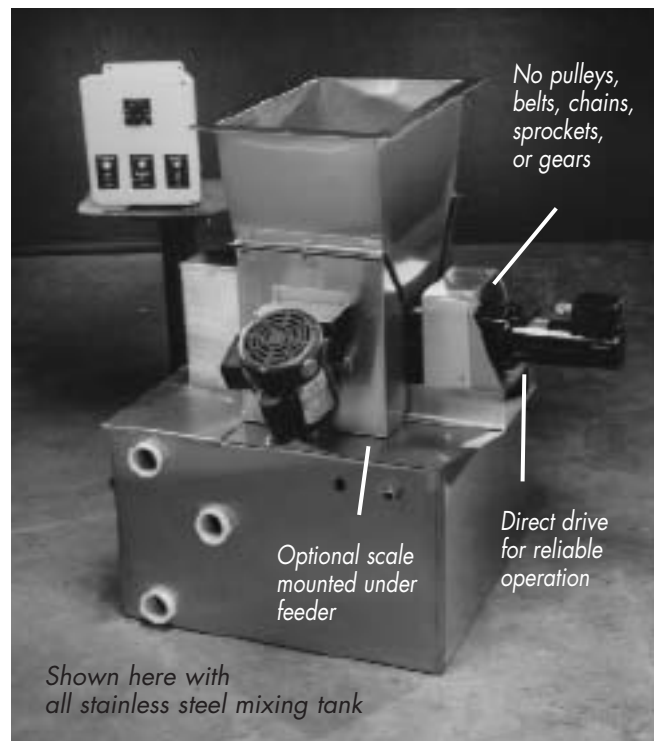
The VF-100 offers several stock feed screw options. Custom configurations are also available.



Adjustable height stand

All stainless-steel construction  
Stainless steel, high efficiency, clog resistant feed screw

Shown here with HDPE plastic mixing tank



No pulleys, belts, chains, sprockets, or gears

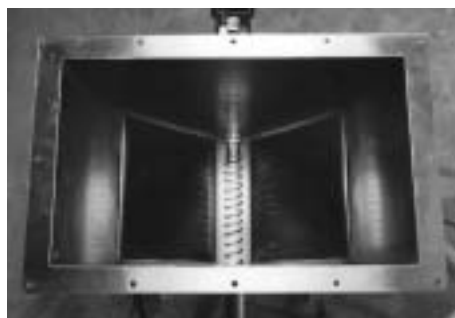
Optional scale mounted under feeder

Direct drive for reliable operation

Shown here with all stainless steel mixing tank

### Optional pulsing or vibrating agitation

An optional pulsing mechanical agitation system keeps even the toughest materials free flowing. Flush black Neoprene or pharmaceutical-grade white Buna-N/vinyl agitation pads are durable and designed for long life. An electric hopper vibrator is also available.



### Wide range of useful options and accessories

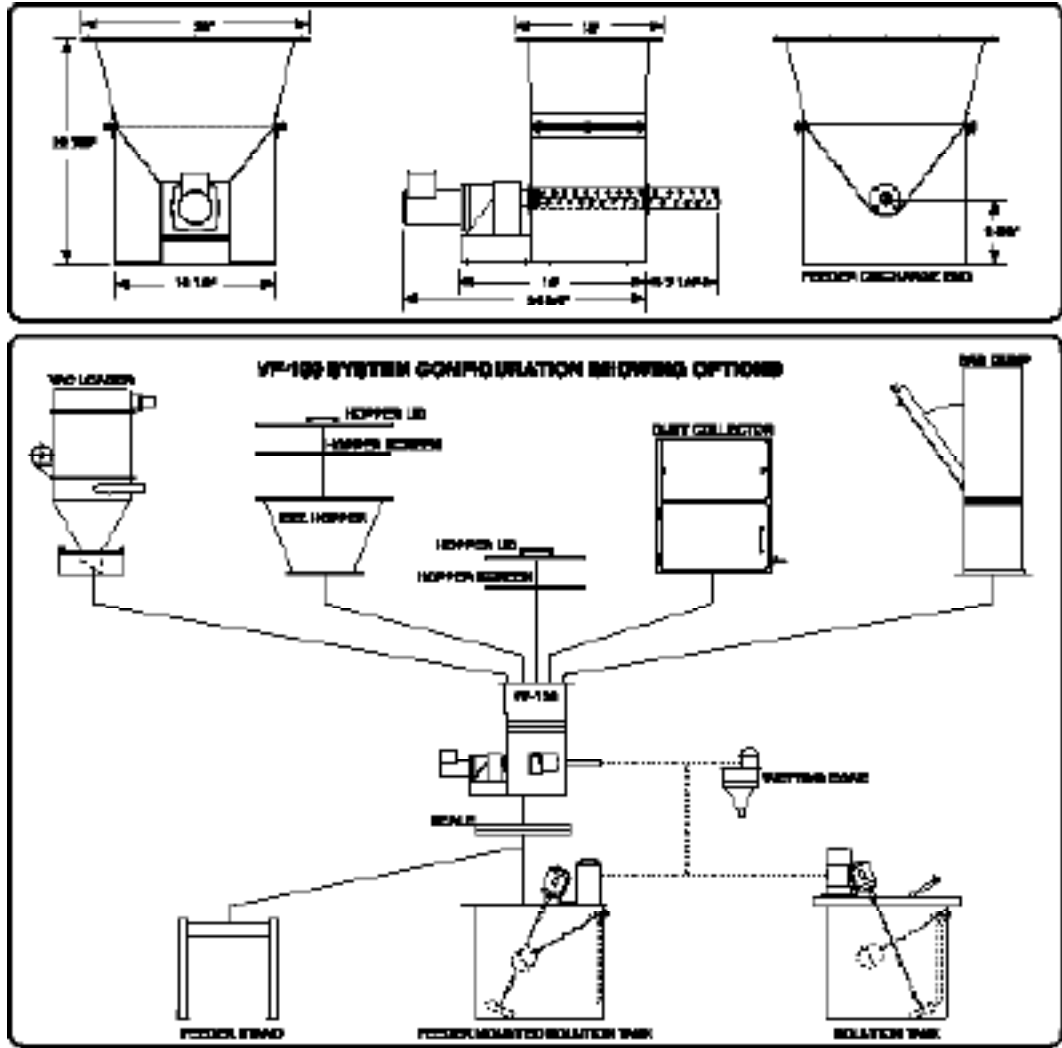
In addition to the scale, remote/local controller, and agitation and mixing tank options, there is a wide range of available accessories such as:

- Adjustable height feeder stand
- Hopper extensions: bag loading and converging extension hoppers
- Hopper lids and screens
- Shut-off gate and flexible adapter for externally supported hopping
- Dust collector package
- Stainless steel wetting cone for difficult chemicals such as powdered activated carbon (P.A.C.) and potassium permanganate (KMnO4)
- Custom controls and complete feed systems



# VF-100

## Volumetric Helical Screw Feeder for Dry Chemicals



### Typical Volumetric Capacities (cu. ft./ hour)

Feed Screw Diameter	Drive Designation (Maximum RPM)				
	-1 (7 RPM)	-2 (14 RPM)	-3 (27 RPM)	-4 (50 RPM)	-5 (83 RPM)
3/4"	0.04	0.08	0.16	0.27	0.50
1-1/2"	0.3	0.6	1.1	2	3.4
2-1/2"	1.5	2.8	5.5	10	17

### Specifications

Materials: Hopper, Base, Screw, Trough, Spout	304 Stainless Steel (Screw and Spout can be "Armorall" or PTFE coated)
Flexible liner with pulse agitation option	Black Neoprene (Optional Food Grade White BUNA-N/Vinyl)
Hopper Capacity	1.6 Cubic Feet
Feeder Motors	1/8 HP (-1,-2), 1/4 HP (-3, -4, -5) SCR Rated, TENV, 90 VDC
Power Required	115 VAC, 50-60HZ, 4 Amps
Maximum Feed Rates	0.04 to 17 cu. ft./hour
Turn Down	30:1
Accuracy with Free Flowing Materials	2% (on volume); true accuracy can only be determined from field testing
Physical Loading Capacity	1000 lb. maximum feeder supported material and hardware
Standard Controls	Potentiometer control of variable speed rate with remote start/stop capability in a NEMA 4X wall or machine mounted housing. Power switch and power indicator.
Available Control Options	Analog and Digital inputs for Remote Automated Operation. Gravimetric or loss of weight control using precision electronic scale and scale controller.