

VIBRA SCREW, INC. BIO-SEPTIC FEEDERS

*Simple and Effective Aseptic Feeders
Built to Pharmaceutical Standards*



Volumetric Feeder



LIW Gravimetric Feeder

Designed specifically for low feed rate applications the Bio-Septic industrial volumetric or gravimetric feeder includes the following customer driven features;

- **Quick and easy disassembly for cleaning**
- **Patented “Controlled Vibration” agitation system for maximizing material handling versatility.**
- **Compact design – high dosing accuracy**

In developing the Bio-Septic Feeder, Vibra Screw had at its service 50+ years of feeder experience and enlisted collaboration with micro-bacteriological specialists (pharmaceutical processors and equipment designers) to produce a sanitary feeder that is: functional, accurate (reliable/repeatable), easy, quick and effectively cleaned.

Bio-Septic is a screw feeder that guarantees the pharmaceutical processor, and all sanitary material handlers, flexibility of selection and aseptic security.

Sanitary Construction

All stainless steel construction, internal and external, assures total non-corrosive and non-contaminated surfaces. Bio-Septic boasts carefully designed and polished surfaces (the entire machine, not just contact surfaces) to eliminate every crevice and bacteria trap.

Multiple motor options to choose from: multi-layered, stainless steel finish coating process specifically for sanitary wash down or all stainless steel construction are optimally suited to the specific conditions of the pharmaceutical industry.

Simple Disassembly and Reassembly

To assure the least interruption of any sanitary process, Vibra Screw designed the Bio-Septic to be disassembled easily and rapidly without the need for hand tools. Cleaning and sanitizing with solvents, steam or detergents is a rapid procedure with the Bio-Septic modular design, so reassembly follows quickly.

Batch or Continuous Feed

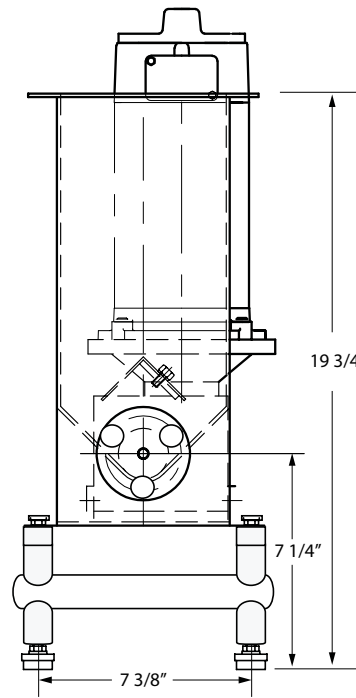
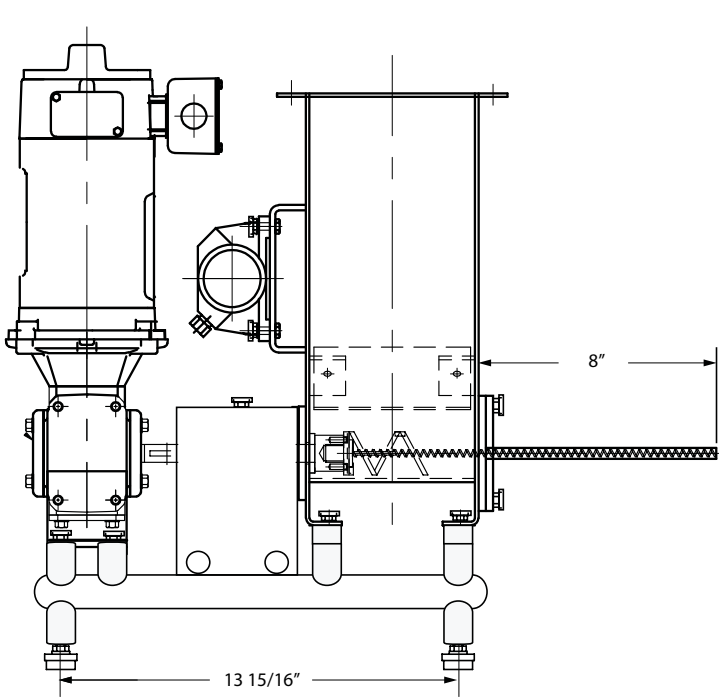
Whether you require sanitary batch feeding or a continuous process, Bio-Septic is adaptable. Use a self contained, unitized feeder for volumetric batch service. Add controlled vibration to feed most materials at accuracies of $\pm 1-2\%$. Optional, controlled vibration assures this accuracy regardless of bridging or packing characteristics of the materials fed.

As a component in a gravimetric system, a Bio-Septic feeder may be installed on a weigh platform. When instructed to operate gravimetrically, the entire unit is monitored by a micro processor-based controller to achieve accuracies of $\pm 1/4$ to $1/2\%$ for batching or as part of a continuous Loss-In-Weight system.

By monitoring the material weight sent to the weigh platform and adjusting the feeder speed in real time, Bio-Septic insures that weights fed are within the tight parameters required in ethical drug production.



Vibra Screw® Inc.



SCREW SIZE	VOLUMETRIC RATE CAPACITY
1/4"	0.00037 to 0.037 ft ³ /hr
3/8"	0.01 to 0.10 ft ³ /hr
1/2"	0.024 to .24 ft ³ /hr
5/8"	0.052 to 0.52 ft ³ /hr
3/4"	0.1 to 1.0 ft ³ /hr
1.0"	0.28 to 2.80 ft ³ /hr
1.5"	0.88- to 8.8 ft ³ /hr

General Specification

Supply hopper, 1/4 ft³
 All components modular for easy cleaning
 Screw Sizes: 1/4", 3/8", 5/8", 1.0", 1.5"
 Feed range 0.00037 to 8.8 ft³

Contact Materials

- 304 or 316 Stainless Steel
- Special Alloys

Food Grade Applications

- Standard:
- All internal seams continuously welded
 - All welds ground smooth
 - All internal surfaces polished, #4 finish or electro-polish
 - Food grade gaskets and seals
 - Material contact zone covers & frames equipped with quick disconnect fasteners for ease of cleaning

Drives

Standard

- DC/ SCR TEFC 115/1/60
- AC Inverter Duty / VFD 460/3/60

Optional

- Analog Signal

Enclosures

Standard: TEFC

Optional:

- Explosion Proof
- Chemical Duty
- Customer Specified

How Controlled Vibration Improves Accuracy

The operating principle of a vibrating Screw Feeder can be compared with the repetitive filling and emptying of cups. Most accurate filling occurs when the cup is filled with material, vibrated to obtain uniform density, and the excess struck off. On emptying, vibrating the cup also ensures complete release of the material.

In our vibrating screw feeders, the same process occurs:

- (1) Material fills the screw in the vibrated trough area
- (2) Vibration brings the material to a uniform density
- (3) Excess material in each screw flight is struck off as the screw enters the feed tube.
- (4) Vibration ensures complete release of material at the discharge end of the screw.

Successive weighing of material samples will show volumetric accuracies of ±1-2%. The Loss-In-Weight controller easily refines this; providing gravimetric accuracies as great as ± ¼-½%.

