

*Modular Design For The
Widest Range of Feeding Applications*

THE VERSIFEEDER



Vibra Screw® Inc.

The VIBRA SCREW TEST LAB

An Important Part of Every Equipment Purchase

Vibra Screw designed its materials test laboratory with one objective: To help you make equipment decisions based on actual material performance.

Laboratory test results provide accurate data to help with:

- New equipment purchases
- Replacing existing equipment
- Designing material handling systems
- Working with new materials
- Improving process systems
- Developing new processes

The Vibra Screw Test Laboratory is fully equipped with all of our many products to demonstrate the best individual unit or complete processing system to handle your unique material. Our test engineers will work with you to duplicate your conditions in small scale tests or in full scale material handling.

Pretest Your Material

Vibra Screw engineers begin all tests with a study of material characteristics. Pretest procedures assure we understand your material bulk density, compressibility, particle size and shape, angle of slide, and moisture content. With these measurements, our engineers can classify your material according to its handling difficulty. Information about your operating conditions (temperature, moisture, degradation and precautions) assure that your lab results will most closely parallel your process and your objectives.

Your Test Results

You'll receive a complete report of all test results. This report, supported by more than 10,000 test records in our technical library, directs our designers in modifying equipment or creating entire systems to best meet the unique characteristics of your process.

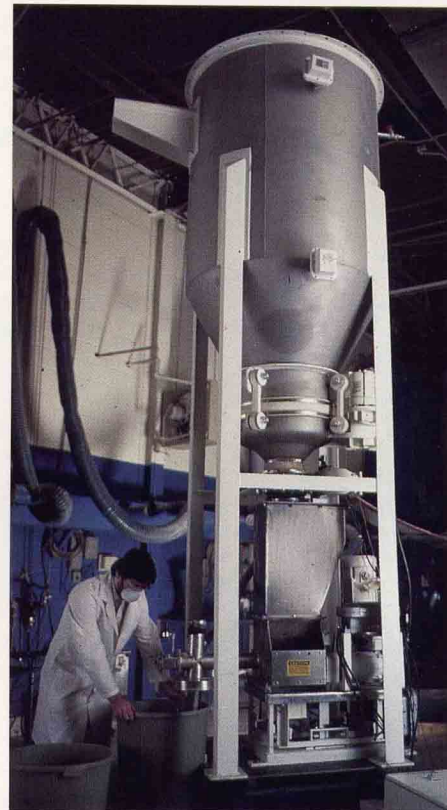
With the confidence of our test laboratory supporting our designs, it's easy to understand why Vibra Screw is the only manufacturer to *guarantee* its equipment to perform in the service for which it is sold. We invite our customers to visit our lab and witness their material being tested.

Save time and expense by witnessing your tests on video tape.



The Vibra Screw Guarantee

No time limits. No conditions. If your Vibra Screw equipment doesn't perform in the service for which it was sold, we'll refund your money. Ask any other equipment manufacturer to put that in writing.



The VIBRA SCREW VERSIFEEDER

Modular Design

The Vibra Screw VersiFeeder is the first volumetric feeder with modular design, enabling a single unit to adapt to the broadest range of feeding applications.

- **A Standard Feeder,**
with static hopper, trough and feed screw for free-flowing materials.
- **An Agitator Conditioner Feeder,**
with secondary trough conditioning screw for semi-free-flowing materials.
- **A Vibrated Feeder,**
using Vibra Screw's controlled vibration design for non-free-flowing materials.

The VersiFeeder permits selection of the most economical design required for a specific application, with the unequalled ability to upgrade the design as materials or characteristics change.

You'll always achieve accuracies of $\pm 1-2\%$, whether with pellets, flakes, powders or fibers.

Application Assistance and Follow Up

Vibra Screw's engineering department will initially recommend a specific configuration for your material. A careful analysis is made of the application derived from our database of more than 10,000 feeder tests and supplemented with additional testing in our laboratories.

As material or characteristics change in the future, we will evaluate your new requirements and recommend new design modules which rapidly retrofit in the field. In a relatively short time, your VersiFeeder is completely re-rated for the new application. Equal versatility is provided when feed rates change through a complete selection of interchangeable screw sizes.

Standard or Sanitary, from 0.0018 to 600 cu ft/hr

The VersiFeeder line includes standard units for screw sizes from 1" to 6", the Mini VersiFeeder for screw sizes down to 1/4", and quick disassembly/sanitary units in all sizes. Whether you're feeding chemicals, foods or pharmaceuticals, VersiFeeder's wide range of models and options meet the need.

Versatility of Application

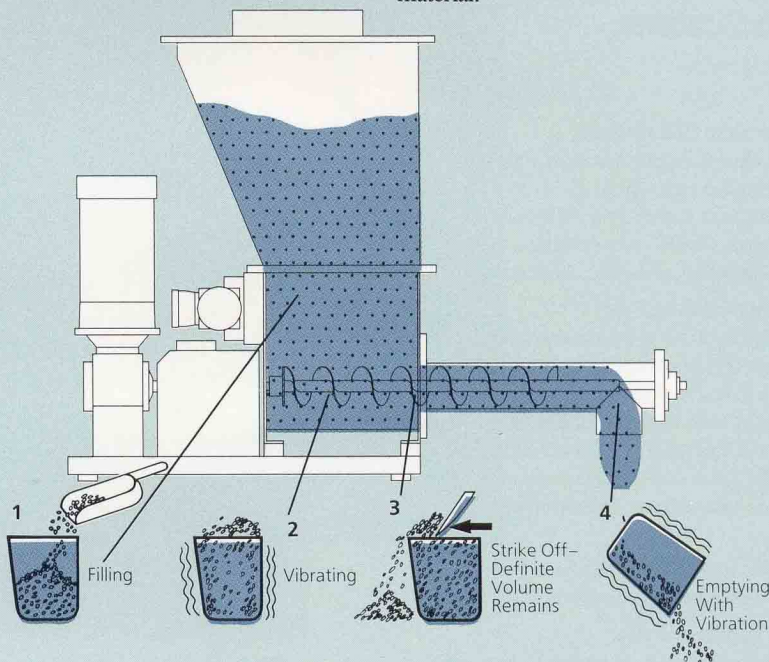
VersiFeeders operate as both continuous or batch feeders with integral supply hoppers as well as optional trough covers for use directly beneath bulk storage bins. A variety of drive arrangements is available, including variable speed DC as standard or optional constant speed, mechanically varied or frequency-controlled AC.

How Controlled Vibration Improves Your Operation

The operating principle of a vibrated screw feeder can be compared with the repetitive filling and emptying of cups. Most accurate filling occurs when the cup is filled with material (1),

vibrated to obtain uniform density (2), and the excess struck off (3).

On emptying (4), vibrating the cup likewise ensures complete release of the material.



In the vibrated screw feeder, the same process occurs. Material fills the screw flights in the trough area (1), is vibrated to a uniform density (2) and is struck off (3) as it enters the metering tube. Vibration of the metering tube

and screw (4) ensures complete release of material at the discharge end.

Successive weighing of material samples will show volumetric accuracies of $\pm 1\%$.

The **SANITARY VERSIFEEDER** *a quick disassembly design*

VersiFeeder offers sanitary/quick disassembly construction in both the Standard and the Mini-Feeder designs. Smooth and self-cleaning internals promote good product flow without hang-up areas. Special dismantling features allow operators in USDA, FDA and other controlled applications to disassemble, clean and re-assemble units rapidly between uses.

Quick-Disassembly For Fast Cleanup

No tools are required to disassemble this VersiFeeder. Quick clamps and hand nuts speed the job. Yet all quick-disconnect VersiFeeders include the same rugged construction and modular flexibility as standard construction models.

Quick-Disassembly Specifications

Sizes: (inches):

$\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, 3, 4 and 6.

Materials of Construction:

Contact surfaces 304 stainless steel (316 stainless steel, optional). Non-contact surfaces: carbon steel. White, food grade painted exterior surfaces. Gasketing, white Nordel (food grade).

Sanitary Construction:

All internal welds continuous and ground smooth; internal surfaces polished to #4 finish. External stainless steel surfaces glass bead blasted to a uniform finish. Quick-release handles for quick disassembly for cleaning contact surfaces. Self-cleaning trough.

Drive:

Same as Mini VersiFeeder and VersiFeeder specifications.

Feed Tube and Screw:

Same as Mini VersiFeeder and VersiFeeder.

Optional Features/Equipment:

Same as Mini VersiFeeder and VersiFeeder. Conditioning Screw available only when self-cleaning trough is not used.

Overall Dimensions:

See diagrams for Mini VersiFeeder and VersiFeeder.



Figure 1.
Hopper cover removed via quick-clamps.



Figure 2.
Hopper removed via quick-clamps.



Figure 3.
Feed tube removed by loosening ratchet hand clamps.



Figure 4.
Feed screw unscrews and slides out.



Figure 5.
Feeder completely disassembled without tools and ready for cleaning.



The MINI VERSIFEEDER

from 1/4" to 3/4"

MAXIMUM FEED RATES			
IN INCHES (MM)		(NOTE: TYPICAL TURNDOWN IS 20 TO 1)	
SCREW DIA.	A	CU.FT./HR.	CU.M/HR.
1.4 (6)	3/8 (10)	.037	.001
3/8 (10)	5/8 (16)	.10	.003
1/2 (13)	3/4 (19)	.24	.007
5/8 (16)	7/8 (22)	.52	.01
3/4 (19)	1.050 (26)	1.0	.03

The Mini VersiFeeder provides five screw sizes for feeding materials at rates less than 1 cu ft/hr. It is specifically designed to overcome the problems associated with accurate, low-rate feeding, including bridging, material buildup and stagnation.

Rugged design and construction give the Mini VersiFeeder the same long life and dependability as its larger counterparts. Simple design and compact size make it easily adaptable to most existing process lines.

Mini-Feeder Specifications

Sizes: (inches):

1/4, 3/8, 1/2, 5/8 and 3/4

Materials of Construction:

Contact surfaces available in carbon steel, 304 stainless steel and 316 stainless steel. Non-contact surfaces: carbon steel, painted exterior surfaces.

Drive:

DC-SCR controlled, 1/3 hp, TENV motor enclosure, supply 115v, 1 phase, 60 Hz, NEMA 12 controls enclosure.

Feed Tube and Screw:

Straight, horizontal/end discharge. - Downspout, vertical discharge with or without end bearing, optional. Wire screw.

Supply Hopper:

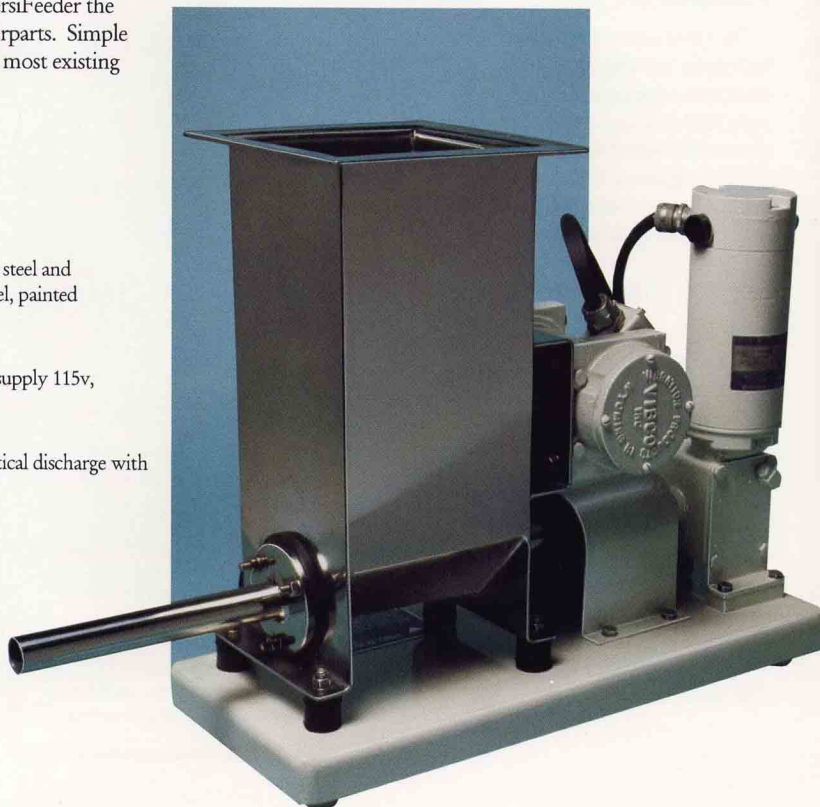
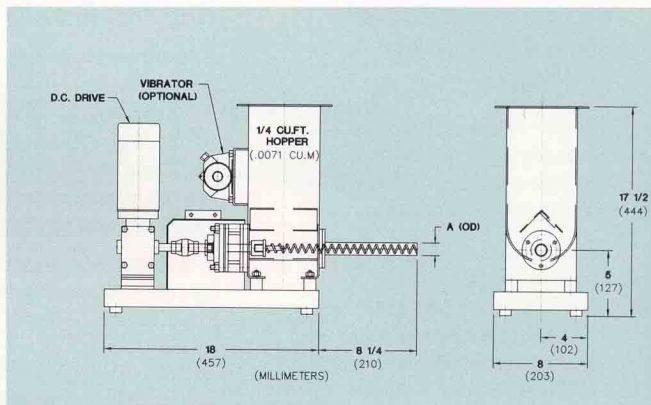
Integral with feed trough, volume 3/4 cu ft (nominal).

Optional Features/Equipment:

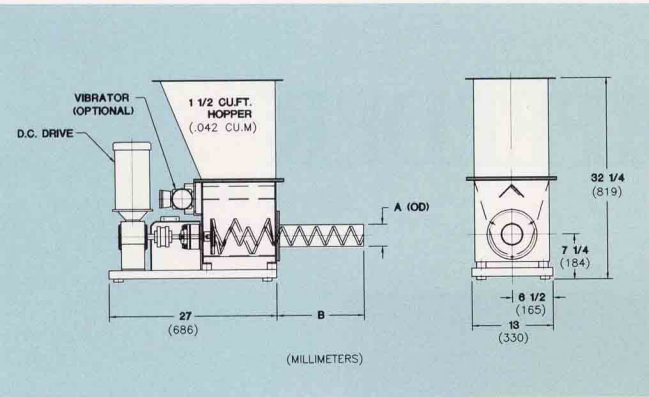
- Vibrator on hopper/feed trough.
- Hopper cover with inlet opening and vent.

Overall Dimensions:

See diagram above.



The STANDARD VERSIFEEDER from 1" to 6"



SCREW DIA.	MAXIMUM FEED RATES			
	IN INCHES (MM)	(NOTE: TYPICAL TURNDOWN IS 20 TO 1)		
	A	B	CU.FT./HR.	CU.M/HR.
1 (25)	1 1/2 (38)	8 1/4 (210)	2.8	.1
1 1/2 (38)	2 (51)	8 1/4 (210)	8.8	.2
2 (51)	2 1/2 (63)	8 1/4 (210)	23.0	.6
3 (76)	3 1/2 (89)	14 (356)	74.0	2.0
4 (102)	4 1/2 (114)	14 (356)	200.0	6.0
6 (152)	6 5/8 (168)	18 (457)	600.0	17.0

Six screw sizes in the standard VersiFeeder provide accurate feeding at up to 600 cu ft/hr. It handles a broad range of materials and may be fitted with an integral, free-flow hopper, as shown, or an optional trough cover for use directly beneath a bulk storage bin.

Optional coating of contact and non-contact parts broadens its application with corrosive and abrasive materials.

Standard VersiFeeder Specifications

Sizes: (inches):

1, 1 1/2, 2, 3, 4 and 6.

Materials of Construction:

Contact surfaces available in carbon steel, 304 stainless steel and 316 stainless steel. Non-contact surfaces: carbon steel, painted exterior surfaces.

Drive:

Sizes 1, 1 1/2 and 2 inches – DC-SCR controlled, 1/2 hp, TENV motor enclosure, supply 115v, 1 phase, 60 Hz, NEMA 12 controls enclosure.
 Sizes 3 and 4 inches – DC-SCR controlled, 3/4 hp, TENV motor enclosure, supply 230v, 1 phase, 60 Hz, NEMA 12 controls enclosure.
 Size 6 inches – DC-SCR controlled, 1 hp, TENV motor enclosure, supply 230v, 1 phase, 60 Hz, NEMA 12 controls enclosure.
 (AC-mechanical, variable speed drive, optional.)

Feed Tube and Screw:

Straight, horizontal/end discharge. – Downspout, vertical discharge with or without end bearing, optional. Wire screw or flighted screw.

Supply Hopper:

Hoppers available as an extension of the feed trough, 1 1/2 cu ft through 15 cu ft.

Optional Features/Equipment:

- Vibrator on feed trough.
- Conditioning screw in feed trough (4" conditioning screw for 1 through 2 inch sizes; 6" conditioning screw for 3 and 4 inch sizes).
- Hopper cover with inlet opening and vent.

Overall Dimensions:

See diagram above.

