

HEAVY DUTY SCREW FEEDERS

Rugged Construction and High Accuracy

Ruggedly constructed to operate 24 hours a day, Vibra Screw's line of volumetric Heavy Duty Screw Feeders will meter even the most difficult materials in an extremely reliable manner.

A patented controlled vibration principle ensures exceptional accuracy of $\pm 1\%$, minute-to-minute. A wide variety of products, from long fibers to micron-sized particles, and materials with bulk densities ranging from 2 to 200 lb/cu/ft can be successfully handled with precision.

Versatile and Rugged

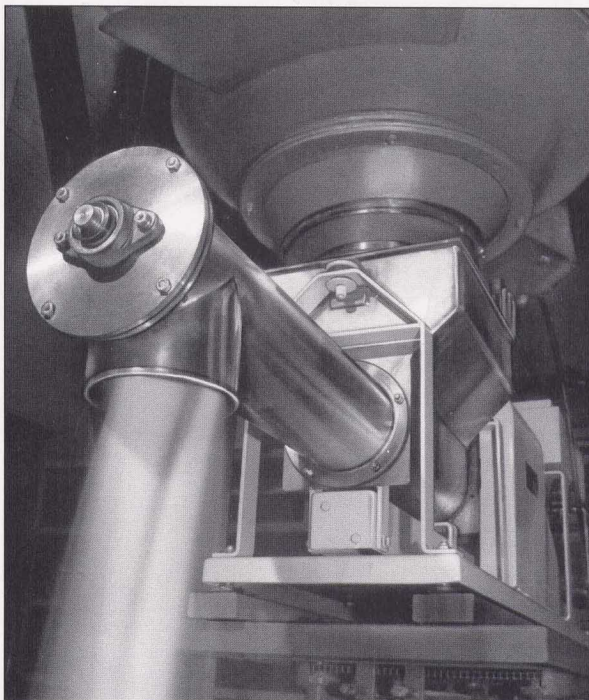
Heavy Duty Screw Feeders are extremely versatile. One unit can precisely meter many different materials with little or no adjustment. When necessary, adjustments can be made quickly and easily. Screws and tubes can also be changed on some models for a wider range of feed rates.

All feeders are fabricated of high strength steel and contain only a few moving components. They are built to operate continuously with only a minimum of maintenance.

Unique Operation

Because maximum feed accuracy is dependent upon positive material flow from storage, we designed these Heavy Duty Screw Feeders for use beneath bulk storage hoppers. Hoppers that pack or bridge should be equipped with a Vibra Screw Bin Activator to ensure consistent material flow to the feeder.

In operation, the feeder trough, screw and tube are subjected to continuous controlled vibration. This permits the material to



Application Experience

Vibra Screw's more than 40 years of material handling experience means that solutions to your special requirements can normally be found among our thousands of applications, worldwide. This permits us to offer the best guarantee in the industry:

If your Vibra Screw equipment doesn't perform in the service for which it was sold, we'll refund your money.

move gently from the upper section of the trough to the feed screw without bridging, packing or flooding. Vibration further conditions the material to a constant bulk density and ensures that each flight or pitch of the screw is filled to its maximum in the filling area and completely emptied at the discharge end. The positive displacement of material is further ensured through the use of a rotating solid flight screw.

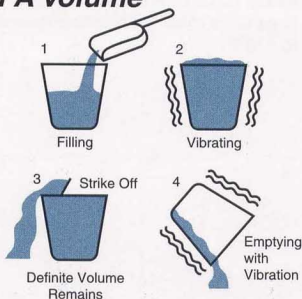
The Vibra Screw Guarantee

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.

To Fill A Volume



The principle of volumetric feeding with controlled vibration 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, shaking or vibrating the cup likewise ensures complete release of material. In the vibrating screw feeder, the same process occurs when material fills the screw flights in the trough area, is

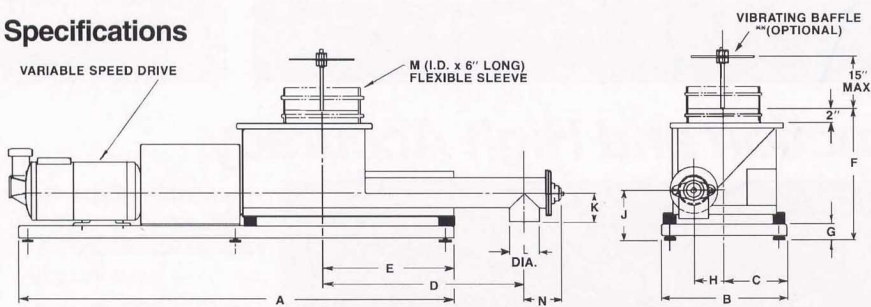
vibrated to a uniform density and struck off as it enters the metering tube.

Vibration of the metering tube and screw ensures complete release of material from the screw flights at the discharge end.

In both cases, successive weighing of material samples will show accuracies in the range of $\pm 1\%$. If the cup or screw is not vibrated, accuracies and repeatability will not be as consistent.

HEAVY DUTY SCREW FEEDERS

Specifications



* Not used when feeder is mounted beneath Vibra Screw Inc. Bin Activators, Live Bins or Live Bottom Bins.

The Vibra Screw Model HD-2 screw feeder is designed to handle the broadest range of high volume applications. Screw sizes are available from 2 to 16 inches in diameter for a rate range of 2.3 to 9800 cubic feet per hour.

The HD-2 is particularly suited for heavy-density materials, pressure or high temperature applications, as well as those requiring extended screws and tubes.

Dimensions inches (mm)

Capacities

Size	A*	B*	C	D	E	F	G	H	J	K	L	M	N	Capacities	
														Max. Cu Ft/Hr (Cu M/Hr)	†Max Lb/Hr (Kg/Hr)
2 (51)	52 (1321)	18 1/2 (470)	9 1/4 (235)	20 5/16 (516)	12 15/16 (329)	18 3/4 (476)	2 3/8 (60)	3 1/2 (89)	6 7/8 (175)	3 5/16 (84)	2 1/2 (63)	8 (203)	4 (102)	23 (0.6)	920 (417)
3 (76)	59 (1499)	18 1/2 (470)	9 1/4 (235)	26 5/8 (676)	17 3/8 (441)	18 3/4 (476)	2 3/8 (60)	4 3/8 (111)	6 7/8 (175)	4 (102)	3 1/2 (89)	10 (254)	4 5/8 (117)	74 (2)	2960 (1343)
4 (102)	59 (1499)	18 1/2 (470)	9 1/4 (235)	26 5/8 (676)	17 3/8 (441)	19 1/4 (489)	2 3/8 (60)	3 7/8 (98)	7 7/8 (200)	4 (102)	4 1/2 (114)	10 (254)	5 1/8 (130)	200 (5)	8000 (3629)
6 (152)	66 (1676)	20 (508)	10 (254)	33 7/8 (860)	24 1/4 (616)	20 1/8 (511)	3 3/8 (86)	2 3/4 (70)	9 7/8 (251)	5 3/8 (136)	7 (178)	12 (305)	6 3/8 (162)	600 (16)	24,000 (10,886)
8 (203)	84 (2134)	24 (610)	12 (305)	43 (1092)	32 1/2 (825)	23 1/4 (590)	4 (102)	3 1/4 (82)	11 1/2 (292)	6 5/8 (168)	9 (229)	12 (305)	7 3/8 (187)	1200 (32)	48,000 (21,772)
10 (254)	100 (2540)	24 (610)	12 (305)	54 1/4 (1378)	42 5/8 (1083)	28 1/4 (717)	4 (102)	3 3/4 (95)	13 1/2 (343)	8 3/8 (213)	11 (279)	14 (356)	8 3/4 (222)	2400 (65)	96,000 (43,545)
12 (305)	106 (2692)	28 (711)	14 (355)	66 1/4 (1683)	50 1/8 (1273)	28 1/4 (717)	4 (102)	2 1/2 (63)	14 1/8 (359)	9 (229)	13 (330)	16 (406)	9 7/8 (251)	4140 (112)	165,600 (75,115)
14 (356)	112 (2845)	28 (711)	14 (355)	72 (1829)	46 1/2 (1181)	31 1/2 (800)	4 (102)	3 1/2 (89)	15 1/8 (384)	10 (254)	15 (381)	20 (508)	11 1/4 (286)	6560 (177)	262,400 (119,023)
16 (406)	120 (3048)	30 (762)	15 (381)	84 (2134)	48 1/4 (1225)	31 1/2 (800)	4 (102)	5 (127)	16 1/8 (409)	11 (279)	17 (432)	24 (610)	12 1/2 (317)	9800 (265)	392,000 (177,808)

* Will vary with drive.

For special size units, consult Vibra Screw.

† Based on materials weighing 40 lb/cu ft (18 kg).

CONTACT MATERIALS

- Carbon steel
- 304 stainless steel
- 316 stainless steel
- Special alloys

EXTERNAL MATERIALS

Carbon steel

COATINGS

Standard external, machinery enamel

Optional external,

- Epoxy paints
- Corrosion resistant paints
- Customer-specified paints, colors

Standard internal, machinery enamel for carbon steel; stainless and other alloys, uncoated

Optional internal,

- Epoxy paints
- Teflon coating
- Customer specified

DRIVES

Standard,

- SCR solid state DC drives, potentiometer-controlled, 115-230/1/60, available with modification to accept external signal; 1-5 ma, 4-20 ma, 10-50 ma, 0-6 v.
- Inverter variable AC drive
- AC mechanical variable drive
- AC constant speed

ENCLOSURES

Standard, totally enclosed, fan-cooled

Optional,

- Explosion-proof, Class I, Group D
- Explosion-proof, Class II, Group E, F & G
- Chemical type, severe duty
- Totally enclosed, non-vented

SANITARY APPLICATIONS

Standard,

- All internal seams continuously welded

- All welds ground smooth
- All internal surfaces polished, #4 finish
- Food grade gaskets and seals

Optional,

As above, but also includes:

- Guards, covers, etc. retained with wing nuts for quick disassembly
- Special TENV motors
- Structural modifications for ease of cleaning.

PRESSURE APPLICATIONS

Feeders can be constructed for pressure applications up to 14.9 psig.

HIGH TEMPERATURE APPLICATIONS

Special modifications permit operation up to 350°F.