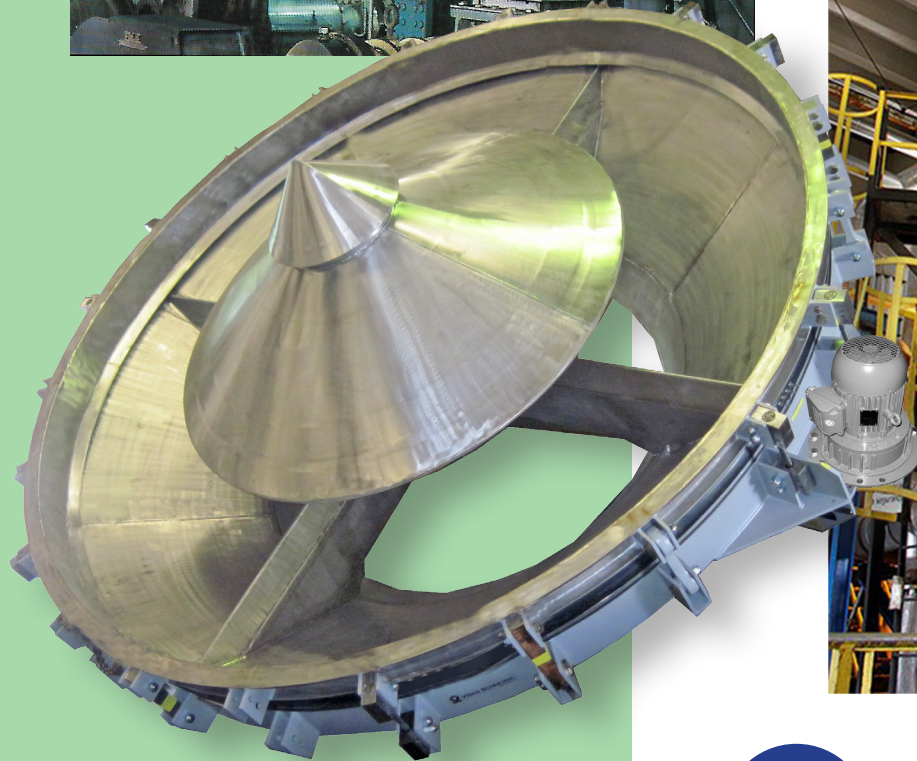


Bin Activators for the Pulp and Paper Industry



Vibra Screw® Inc.

The Bin Activator

The Vibra Screw Bin activator has been successfully used in discharging wood products from storage in over 6000 applications spanning more than 60 years. It has been applied on both dry and presteaming applications with equal success. Current units incorporate numerous refinements and innovative features including an oil lubricated gyrator, steam lines internal profile, high temperature elastomer seals and a high load cable suspension system for certain applications. The Bin Activator represents today's most effective wood product feed system.

Operation

In Operation the Bin Activator replaces the converging cone section of the storage silo. High frequency, low amplitude vibration is applied to the unit which induces movement of material to a central outlet. An internal baffle prevents the bin headload from packing material at the outlet while the baffle's conical shape transmits vibration high into the bin to eliminate overhead bridging. Material drawdown is uniform and even, which is particularly important in presteaming applications to provide proper steam distribution. Material can be discharged directly to process or positively metered at controllable rates with an optional integral screw feeder.

Construction

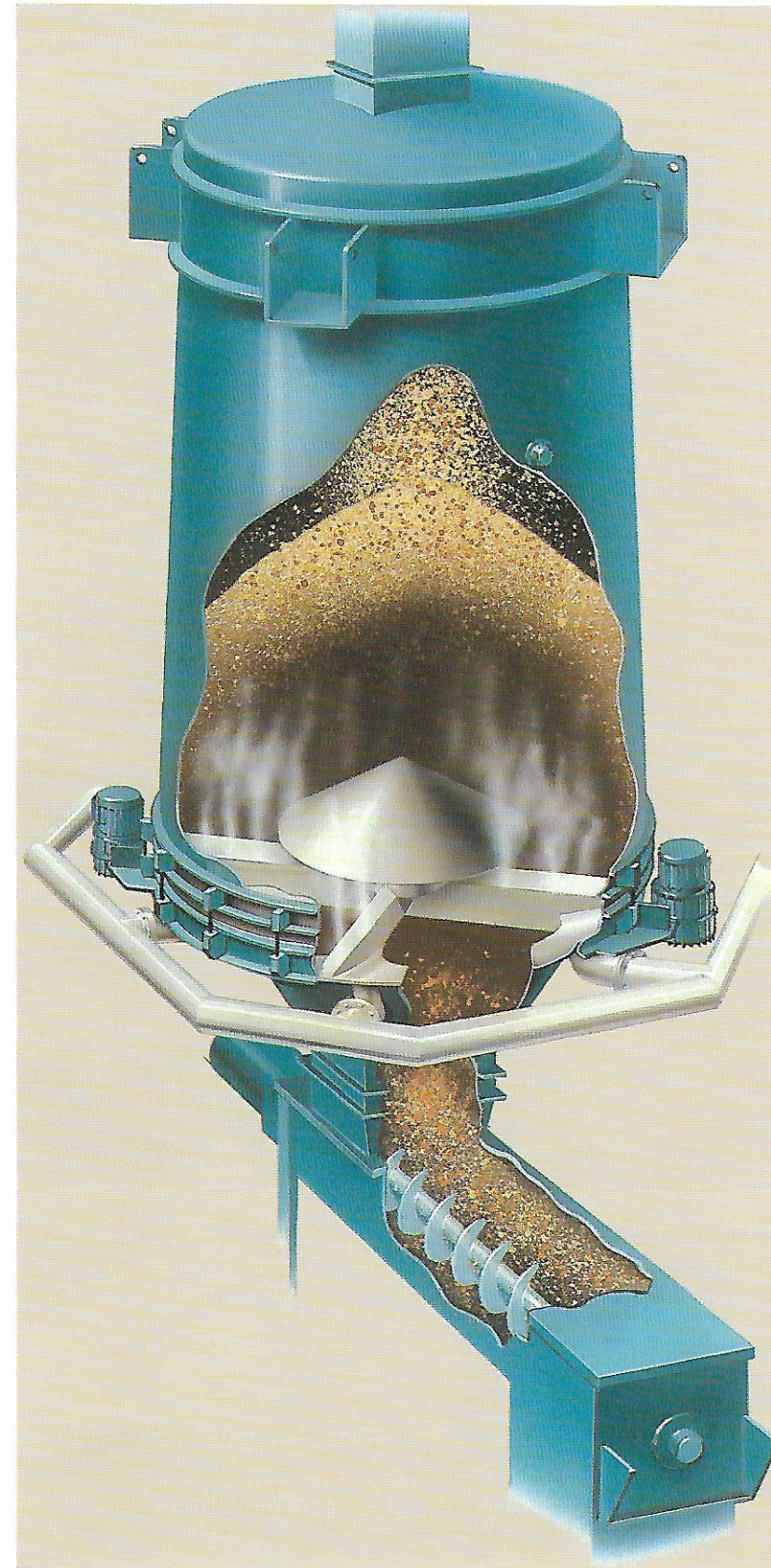
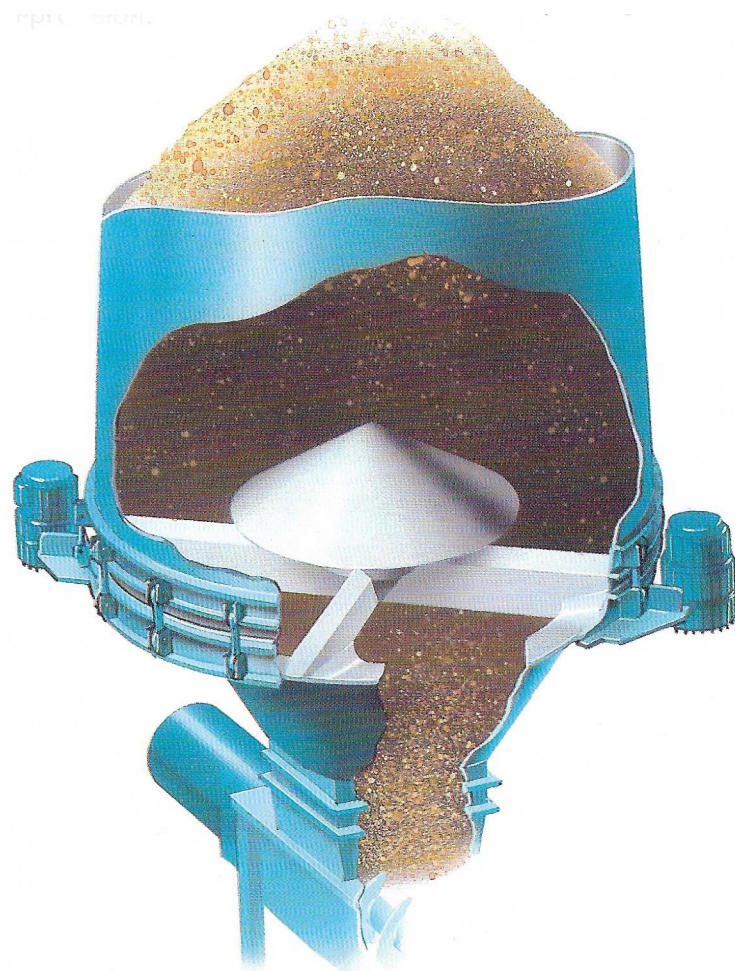
Bin Activators construction consists of a heavy steel pressure vessel shell, isolation system and external gyrator. There are no moving parts other than the external gyrator. Aflas TFE elastomer sleeves and steam inlets all but eliminate chemical attack of these elements. Stainless Steel "high load" cable hangers provide unparalleled load bearing and isolation on larger systems.

Advantages

Advantages of the Bin Activator over mechanical/hydraulic discharge devices are numerous:

- Initial cost and maintenance are significantly less.
- The Bin Activator System can be easily retrofitted into existing bins and does not require special bin design or mounting provisions.

- Horsepower requirements are low; from 1.5 to 15 HP maximum.
- The only moving part is the gyrator, mounted externally to the unit and guaranteed for 20,000 hours of continuous operation.
- The Bin Activator transmits vibration throughout the storage material for control of bridging-far more effective than the localized effect of others.
- Units are available up to 18ft diameter for use on storage silos 30 ft diameter or more.
- The Bin Activator is incomparably reliable.



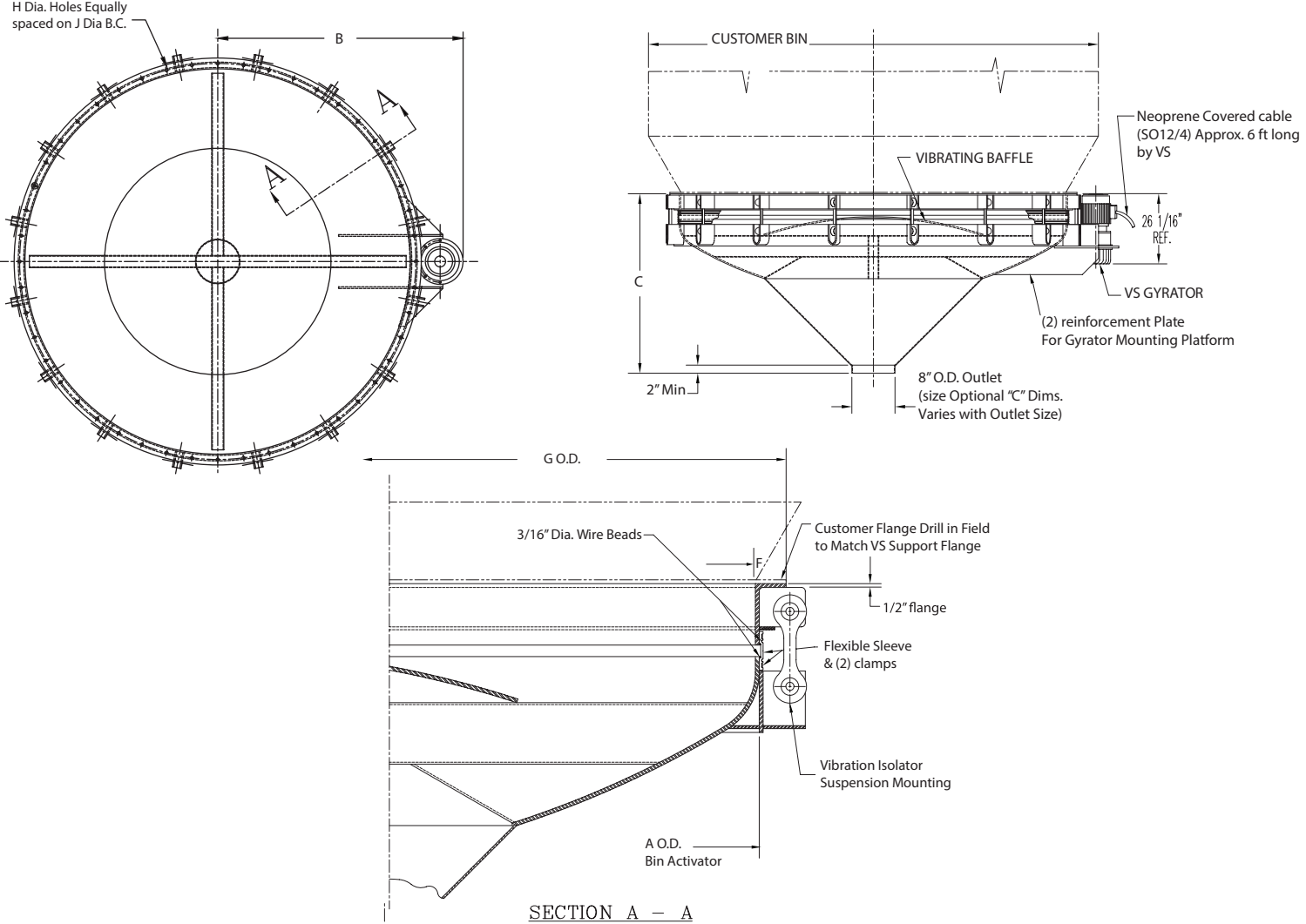
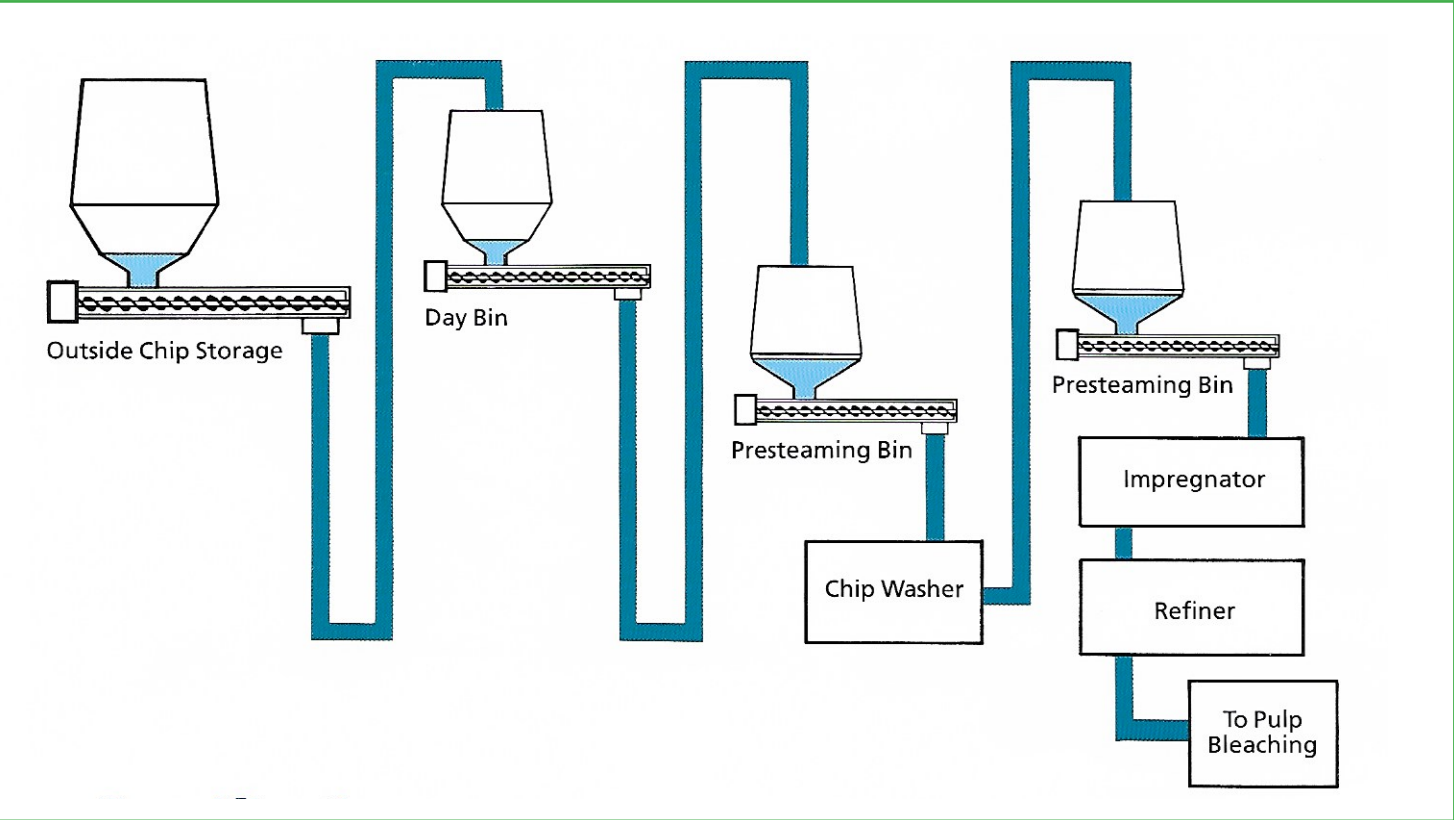
Bin Activator Chip Feeding System

Complete bin Activator Chip Feeding system are available that provide a storage silo, Bin Activator, and integral screw feeder. Such systems are suitable for raw chip storage, day bins and feed or presteaming bins ahead of impregnators, digesters and refiners. They provide positive and controlled feed of chips from storage to process.

Specific Bin activator sizing criteria have been developed over the years to permit accurate selection of bin/Bin activator diameter ratios. For example, general storage and day bins are typically large capacity and use smaller diameter Bin Activators. Presteaming bins require smaller capacity but very even drawdown for proper steam distribution and use Bin Activators sized equal or near equal in diameter to the bin.

Screw feeders are provided as integral part of the system when accurate and controllable flow is required in addition to effective bin drawdown. Screw feeders are particularly useful as prefeeder to plug screw feeders. There they provide positive, continuous flow of chips to the plug screw inlet, eliminating voids and assuring even plug screw and refiner operation. Screw feeder rates are typically variable over an 8 to 1 range and are accurate to within $\pm 1-2\%$,

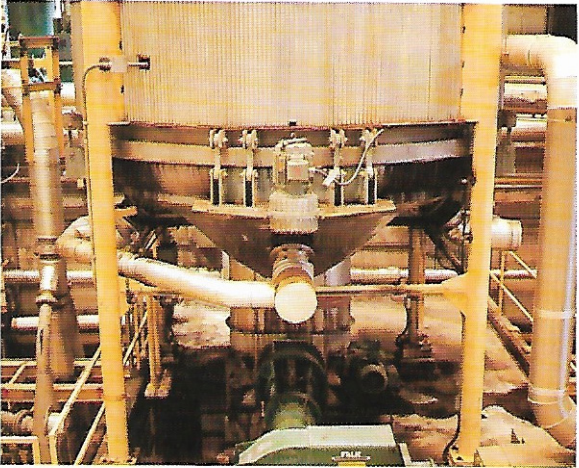
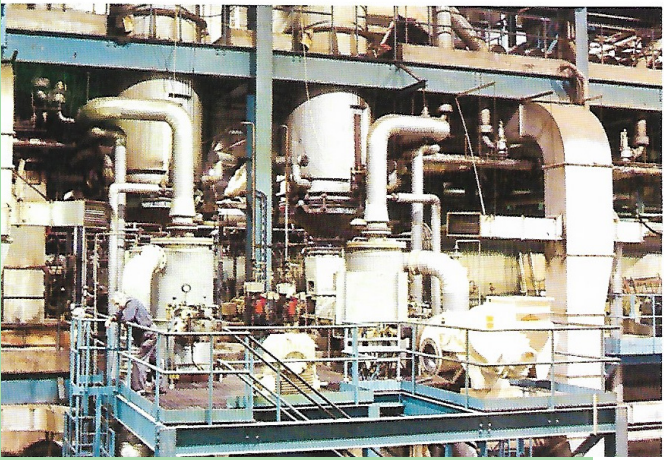
Bin Activators may also be teamed with Vibra Screw weigh feeders to provide high accuracy product feed and process control by weight.



Bin Activator Chip Feeding Systems		
Bin Activator Diameter (ft)	Typical Bin Diameter (ft)	
	Non-Steaming	Steaming
5	10-12	5-6
6	12-14	6-7
7	14-16	7-8
8	16-18	8-9
10	20-25	10-15
12	24-30	14-20
14	28-35	14-20
16	32-40	16-25
18	34-42	18-30

VIBRA SCREW Bin Activator & HDBD Heavy Duty Bin Discharger Dimensions inches (mm)												
SIZE	A	B	C	F		G	H		J	HP	(KW)	WGT
				*C.S.	**S.S.	C.S. & S.S.	Dia.	NO				
5'	60" (1524mm)	43 3/16" (1097mm)	36 1/8" (918mm)	4" (102mm)	3 3/4" (95mm)	67" (1702mm)	11/16" (17mm)	30	63" (1600mm)	1 1/2	1.1	850 lb (383kg)
6'	72" (1829mm)	51" (1295mm)	41 1/2" (1054mm)	4" (102mm)	3 3/4" (95mm)	79" (2007mm)	11/16" (17mm)	36	75" (1905mm)	2 1/4	1.9	1200" (540kg)
7'	84" (2134mm)	60" (1524mm)	46" (1168mm)	4" (102mm)	3 3/4" (95mm)	91" (2311mm)	13/16" (21mm)	36	87" (2210mm)	3	2.24	2340 lb ((1061kg)
8'	96" (2438)	67" (1702)	52 1/4" (1327mm)	4" (102mm)	3 3/4" (95mm)	103" (2616mm)	1 1/8" (29mm)	40	99" (2515mm)	3	2.24	2810 lb (1274mm)
10'	120" (3048mm)	79" (2007mm)	62 3/4" (1594mm)	4" (102mm)	3 7/8" (98mm)	127" (3226mm)	1 1/8" (29mm)	48	123" (3124mm)	3	2.24	4900 lb (2222kg)
12'	144" (3658mm)	91" (2311mm)	72 1/2" (1842mm)	4" (102mm)	3 7/8" (98mm)	151" (3835mm)	1 1/8" (29mm)	48	147" (3734mm)	5	3.73	6740 lb (3057mm)
14'	168" (4267mm)	103" (2616mm)	89 1/2" (2273mm)	4" (102mm)	4" (102mm)	175" (4445mm)	1 1/8" (29mm)	72	171" (4343mm)	(2) 5	3.73	12,200 lb (5533kg)
15'	180" (4572mm)	109" (2769mm)	92" (2337mm)	4" (102mm)	4" (102mm)	187" (4750mm)	1 1/8" (29mm)	90	183" (4648mm)	(2) 5	3.73	14,000 lb (6349kg)
16	192" (4877mm)	115" (2921mm)	97" (2464mm)	4" (102mm)	4" (102mm)	199" (5055mm)	1 1/8" (29mm)	96	195" (4953mm)	(2) 5	3.73	16,000 lb (7256kg)
18'	216" (5486mm)	127" (3226mm)	106 3/4" (2702mm)	4" (102mm)	4" (102mm)	223" (5664mm)	1 1/8" (29mm)	96	219" (5562mm)	(4) 5	3.73	24,000 lb (10886kg)

Note: Dimensions are for reference only, not design





Vibra Screw Bin Activators and Chip Feeding Systems are used worldwide throughout the wood products industry. Each application is carefully studied by our experienced engineering staff to arrive at a completely satisfactory design. After-sale support for start-up and service is provided by highly trained technicians. Finally, all Vibra Screw equipment is unconditionally guaranteed to perform in the service for which it is sold. We are proud of our extensive roster of satisfied customers.

- Abitibi Price
- Boise Cascade
- Champion Int.
- C.I.P.
- Consolidated-Bathurst
- Crestbrook Forest Ind.
- Crown Zellerbach
- Domtar
- Donohue
- F.F. Soucy
- Georgia Pacific
- Great Lake Forest Products
- Hammermill Paper
- International Paper
- Kamyr
- MacMillan Bloedel
- Manning Diversified
- Nekoosa Paper
- ND Paper
- Olinkraft
- Sappi
- Sonoco Products
- Stone Container
- Sunds Defibrator
- Union Camp
- Verso
- Weyerhaeuser



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