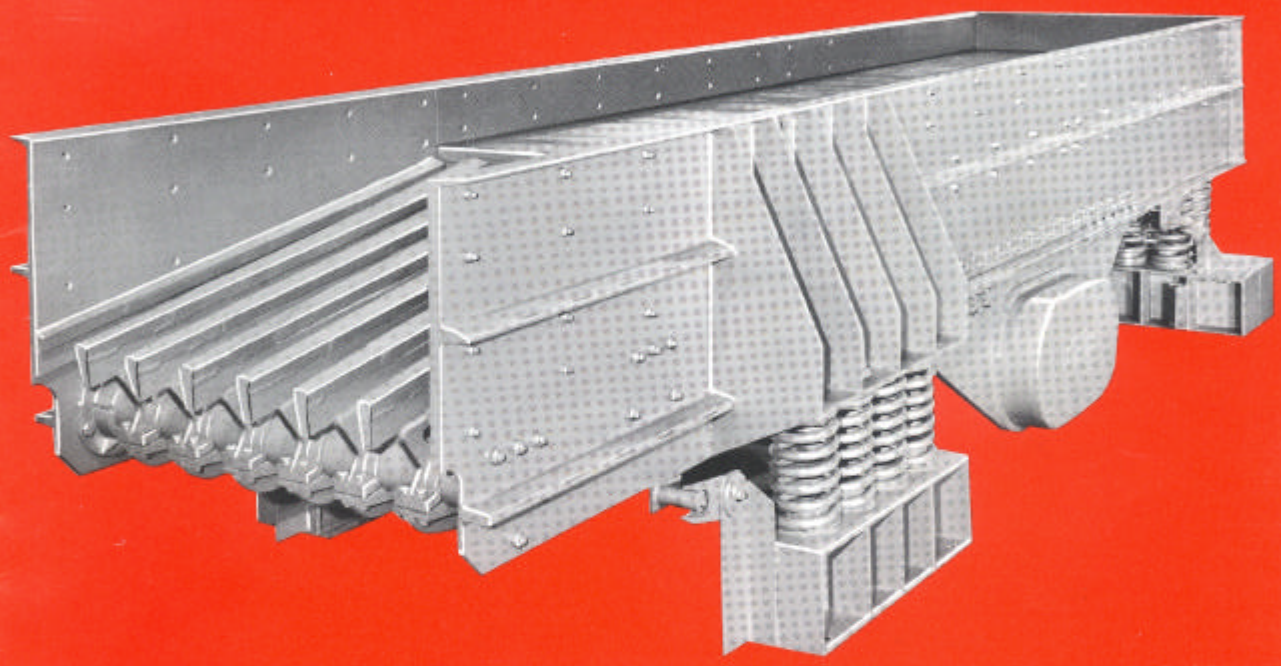
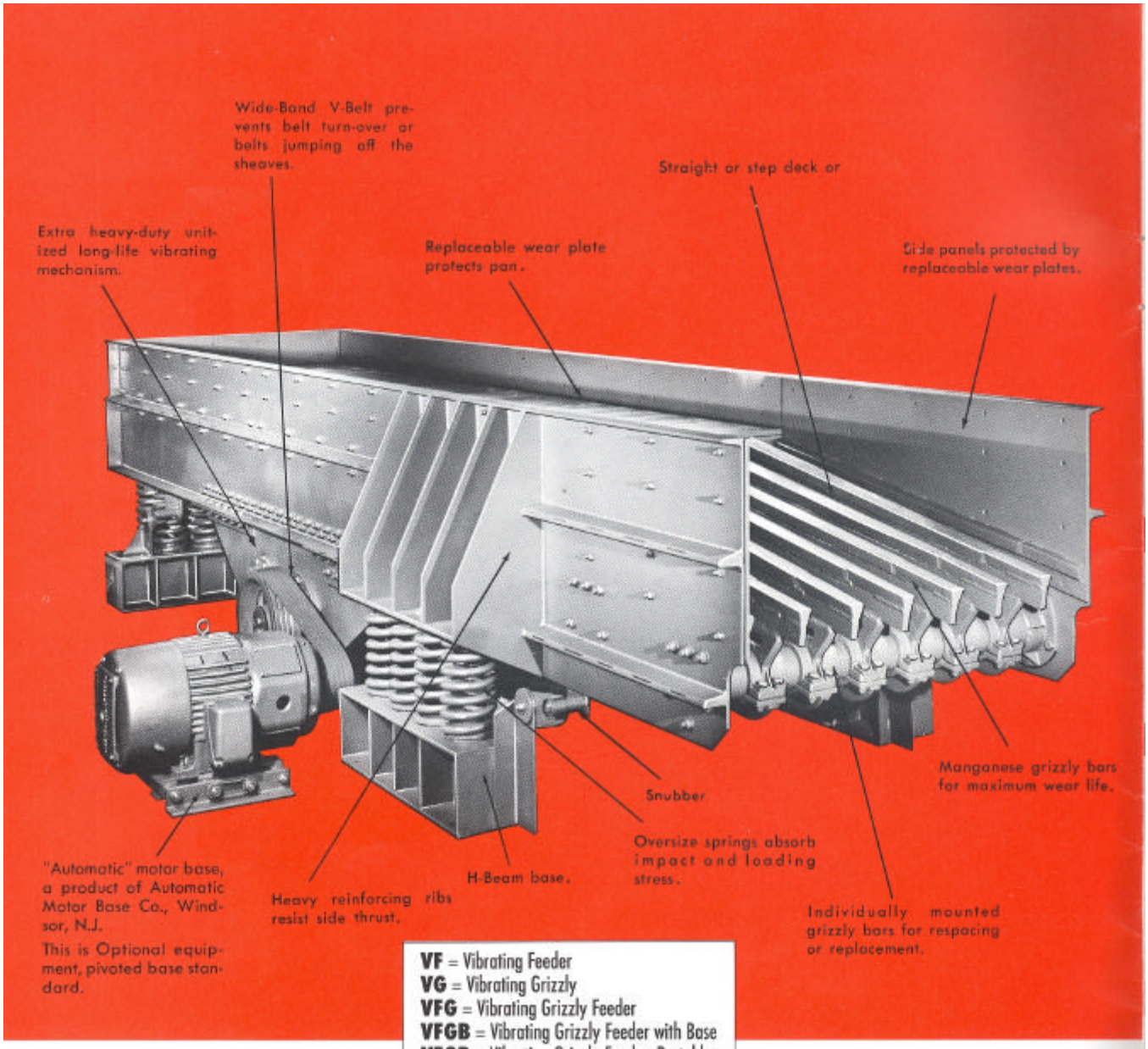
BULLETIN NO. 370



DEISTER®

VIBRATING FEEDERS and GRIZZLIES



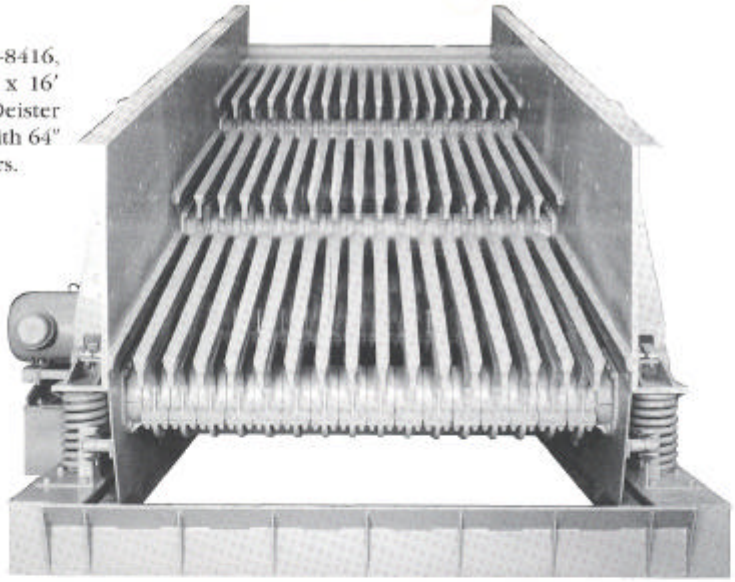
VF = Vibrating Feeder
VG = Vibrating Grizzly
VFG = Vibrating Grizzly Feeder
VFGB = Vibrating Grizzly Feeder with Base
VFGP = Vibrating Grizzly Feeder, Portable

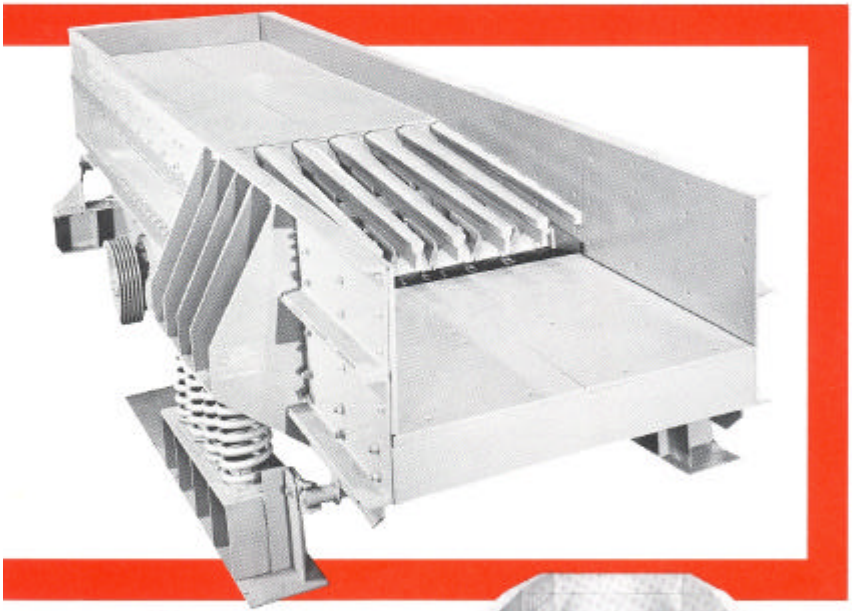
Type VFG Vibrating Grizzly Feeder

Deister Type VFG Vibrating Grizzly Feeders combine scalping and feeding in one operation. They are designed to provide a uniform, continuous controlled flow of material from the hopper to the crusher. Installed ahead of a primary or secondary crusher, larger pieces are scalped into the crusher while undersize material passes through the grizzly bars, bypassing and relieving the load to the crusher. Thus the use of Deister Type VFG Grizzly Feeders increases crusher capacity and all-around efficiency.

This extra heavy-duty, high capacity unit has been designed primarily for feeding "mine run" or "quarry run" materials. It can handle the tougest feeding jobs . . . jobs containing a high percentage of large chunks of rock or ore. Usually mounted directly under a hopper or bin to feed, convey and scalp, it prevents material from bridging within the hopper and eliminates surges in the load to the crusher.

Type VG-8416, 84" wide x 16' long, Deister Grizzly with 64" grizzly bars.





Type VFG-6020, 5' wide x 20' long, Deister Vibrating Grizzly Feeder with 11' long lead pan, 5' long grizzly section with approximate 6' opening at the discharge end, and 4' long pan at discharge end.

Type VFG-6030, 60" wide x 30' long, Deister Vibrating Grizzly Feeder with 5' long grizzly bars.

The Deister Vibrating Grizzly Feeder is ruggedly built to provide long, dependable, service-free operation. Its heavy H-beam cross members, heavy-duty vibrating frame, and specially designed coil springs can absorb tremendous impact and loading stress. These springs also entirely eliminate the transmission of vibration or shock loads to the supporting structure.

The heavy side plates are protected by replaceable liners or wear plates. In addition, side plates are strongly buttressed to withstand massive side thrust. For unusually abrasive conditions, the bottom pan sections can also be equipped with "bolt-on" replaceable wear plates.

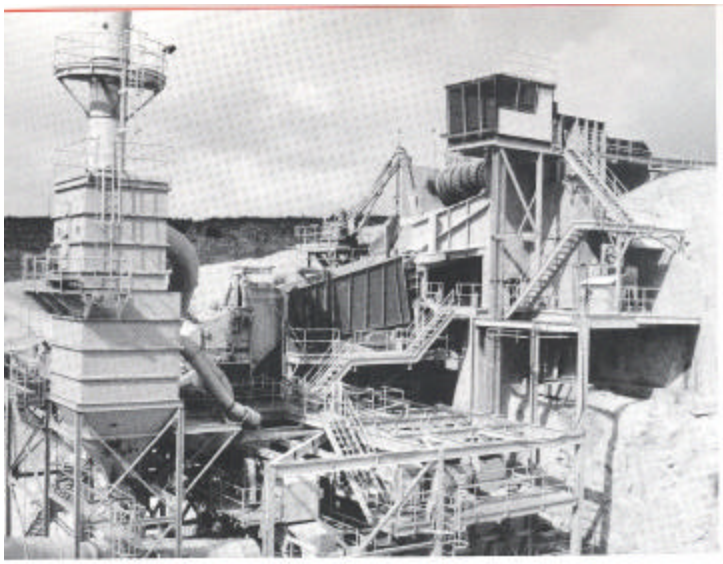
Grizzly Bars

Cast manganese steel grizzly bars are individually mounted for adjustability and ease of replacement. They are bolted on, permitting changes in product size to be handled by simply respacing the bars. Grizzly bars are tapered from top to bottom and from feed to discharge end to provide a self-cleaning feature and help prevent material from "hanging up."

Where the Type VFG is used to feed the conveyor belt instead of the crusher, grizzly bars can be used to build a bed of finer material on the conveyor to cushion or absorb the impact of the larger material from the feeder. In applications where the grizzly section is not required, the Deister Vibrating Feeder can be equipped throughout with solid pan sections.

The Type VFG Feeder can be mounted in a horizontal position; however, capacity will be increased by mounting on a slope of up to 10 degrees. Where adjustable feed rates are required, the Deister Vibrating Grizzly Feeder may be equipped with a variable speed drive.

The Deister VFG is available in a complete range of sizes from 36" to 96" wide, and from 8' to 24' in length. A heavy H-beam sub-base can be supplied as optional equipment.

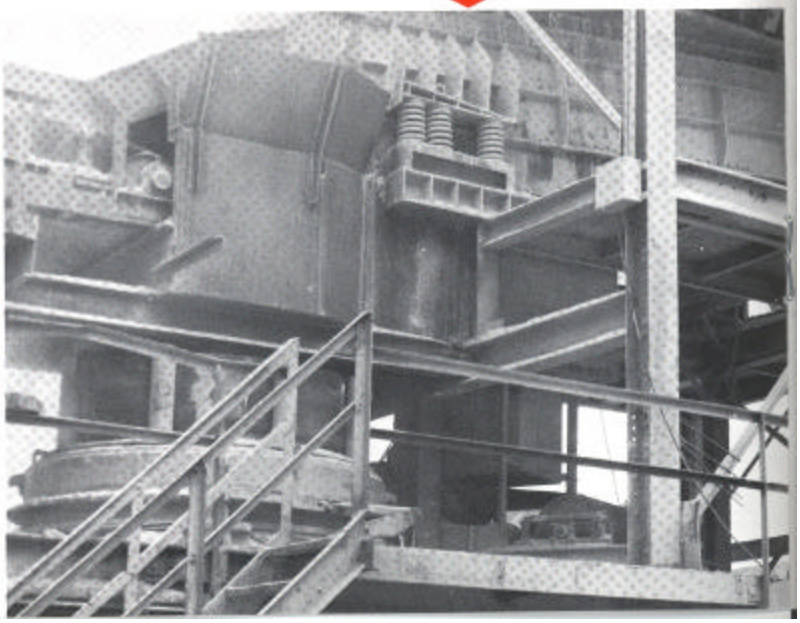


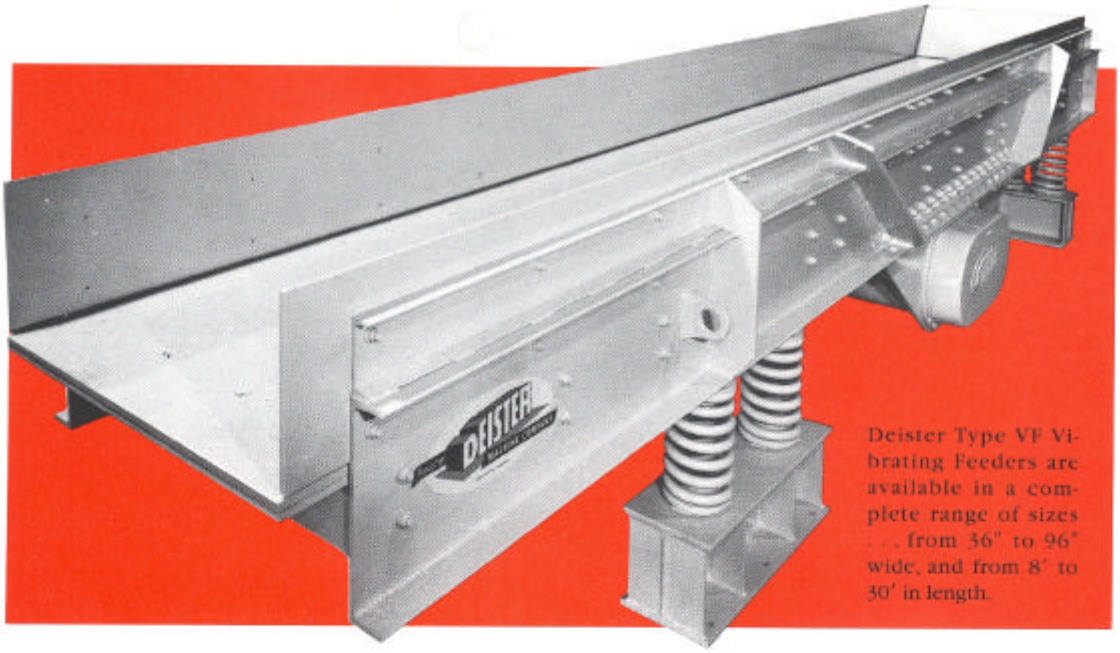
A Deister VF-7824, 78" wide x 24' long, Vibrating Pan Feeder and a Deister VG-8420, 7' wide x 20' long, Vibrating Grizzly feeds the material at Parker Lafarge plant at New Braunfels, Texas, with a capacity of 4 million t/y of limestone for the San Antonio and Houston areas.

Deister Type VFG Vibrating Grizzly Feeder located between the truck dump and the crusher at the plant of Erie Stone, Inc., Huntington, Indiana. This 5' x 20' feeder is handling feeds at rates up to 800 tons of quarry run material per hour including large chunks up to 54" in diameter.

The vibrating grizzly feeder bars are spaced 3" apart. The oversize, which averages 80% of the load from the hopper, is fed directly into the primary crusher. The grizzly feeder relieves the load to the crusher by removing approximately 20% of the total load from the quarry. The minus 3" material is discharged directly onto a Deister Single Deck 5' x 10' inclined scalper equipped with 1½" punched plate.

Type VFG-6020, 5' x 20' Deister Vibrating Grizzly Feeder with 15' pan and 5' grizzly, inclined at 10°.





Deister Type VF Vibrating Feeders are available in a complete range of sizes . . . from 36" to 96" wide, and from 8' to 30' in length.

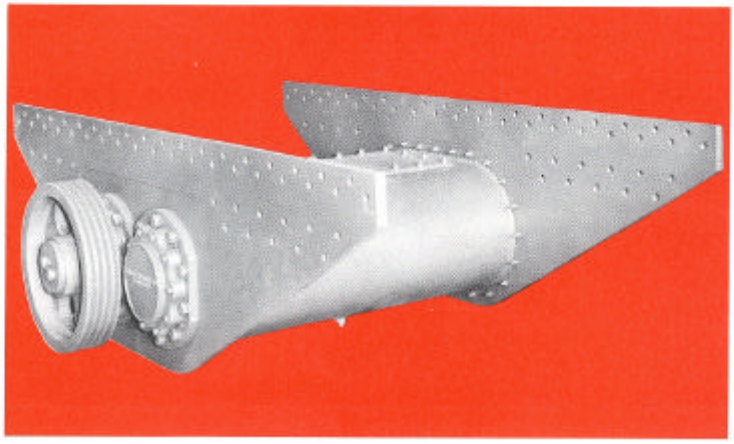
Unitized Long-Life Vibrating Mechanism

The power plant of the Type VFG Vibrating Grizzly Feeder is a heavy-duty model of Deister's Unitized Life-Time Vibrating Mechanism for horizontal screens. This design is time-tested and has proven dependable under the toughest operating conditions. Drive may be from either side of the feeder. Variable speed drive is available if your process requirements include a variable feed rate.

The vigorous, positive motion of the vibrating mechanism of the Deister Type VFG is the result of two unbalanced shafts revolving in opposite directions. This produces a vibrating action which carries the material forward. Full enclosure of the Unitized "Life-Time" Vibrating Mechanism prevents grit, grime, or moisture from getting into the rotating parts. The entire vibrating mechanism is a precision constructed, jig assembled unit. It incorporates all the advantages of a two-bearing vibrating mechanism and runs in a bath of oil with internal and external labyrinth seals to prevent loss of lubricant and entrance of dirt.

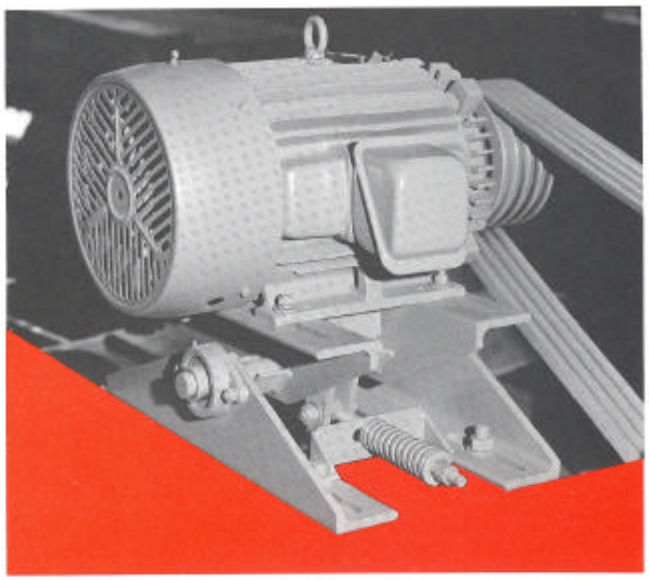
The lower portion of the vibrating mechanism serves as the oil reservoir across its entire length. The oil is agitated by slingers on the eccentric shafts and constantly envelops the spherical roller bearings and all moving parts. It should never be necessary to add oil to the mechanism, with only one or two oil changes per year required. This system is the ultimate in oil lubrication of anti-friction bearings and assumes safe operating temperatures under extremely hot operating conditions, where it, in effect, acts as an oil cooling system.

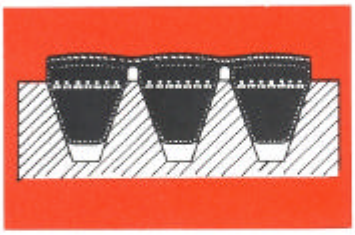
Renewable sleeves between the bearing inner race and the shafts prevent wear on the shafts. Should wear occur, even after years of rugged service, the original close "factory tolerances" can be easily restored by the simple replacement of these renewable sleeves. Stroke adjustments in the field can be accomplished by the addition or subtraction of counterweight plates on the shafts.



Pivoted Motor Base

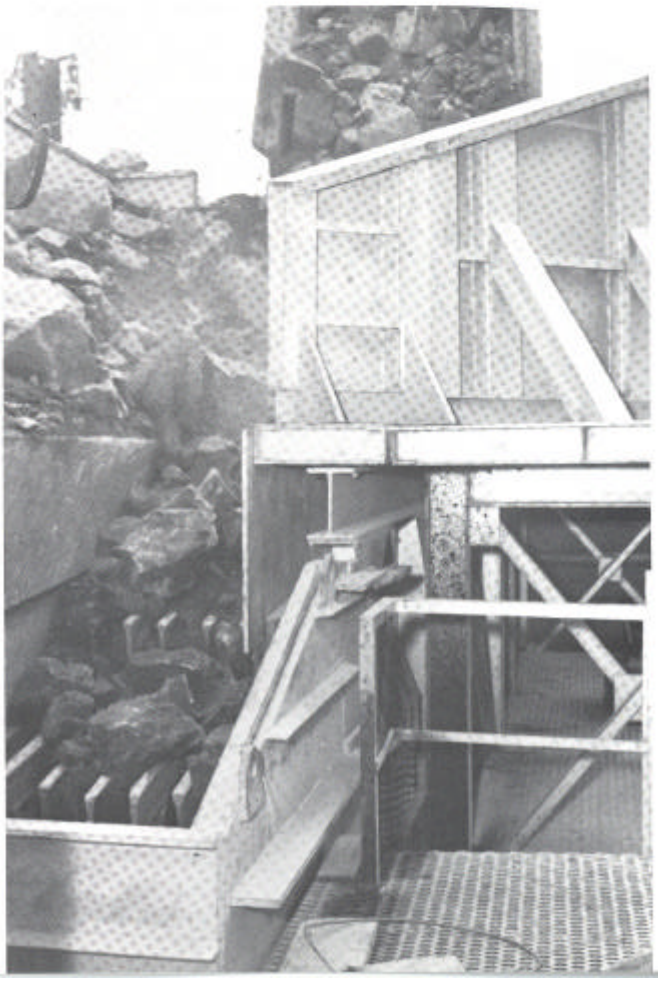
Standard equipment on all Deister feeders is a heavy-duty pivoted motor base of our design and manufacture. This base is equipped with a pivoting shaft rotating in a sealed grease-lubricated ball bearing housing. Belt tension is adjusted and maintained by the motor location on the base and a spring-loaded cam.





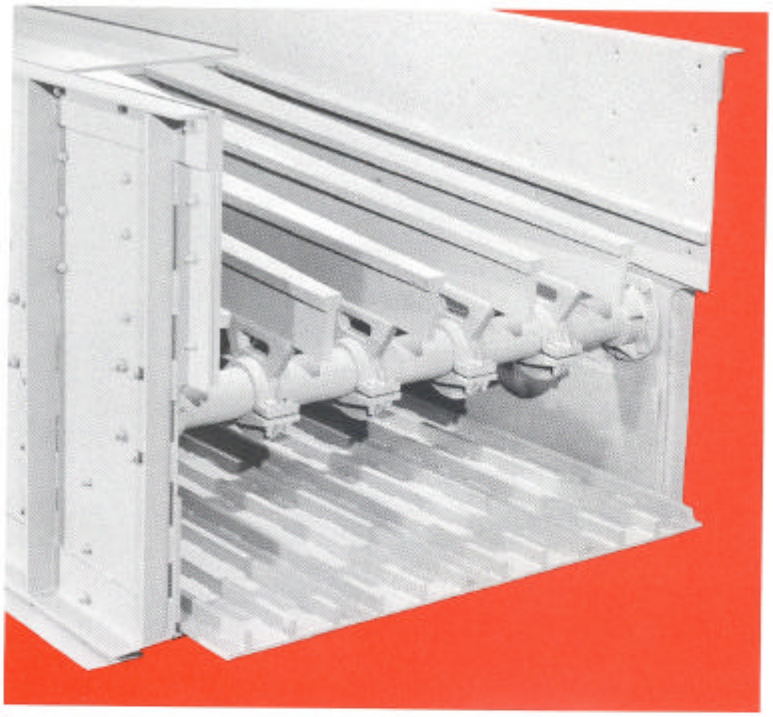
Wide-Band Belts

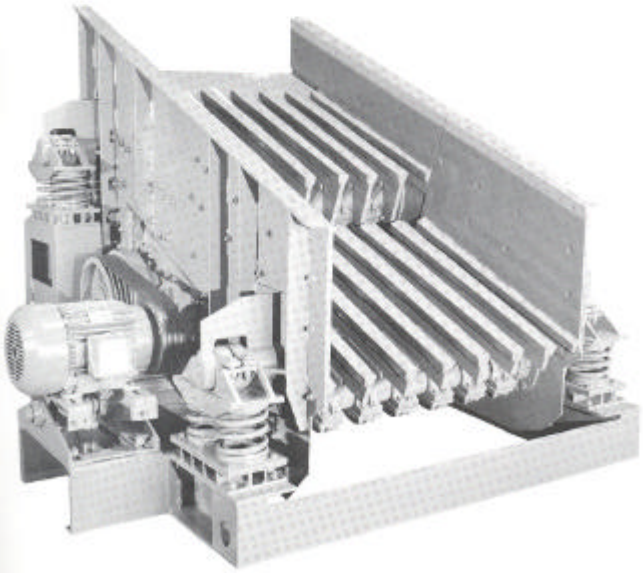
Wide-band V-belts are individual matched V-belts bonded together with a band. This band does not touch the lands between the sheave grooves. This type of belt offers protection against whipping, belt turn over and belts jumping off the drive.



Grizzly sections are available in straight-deck or step-deck construction, as shown in this photo of a Type VFG-6020, 5' x 20', grizzly feeder with 12' long pan and two 4' long step-deck grizzly sections operating in a South Carolina granite quarry.

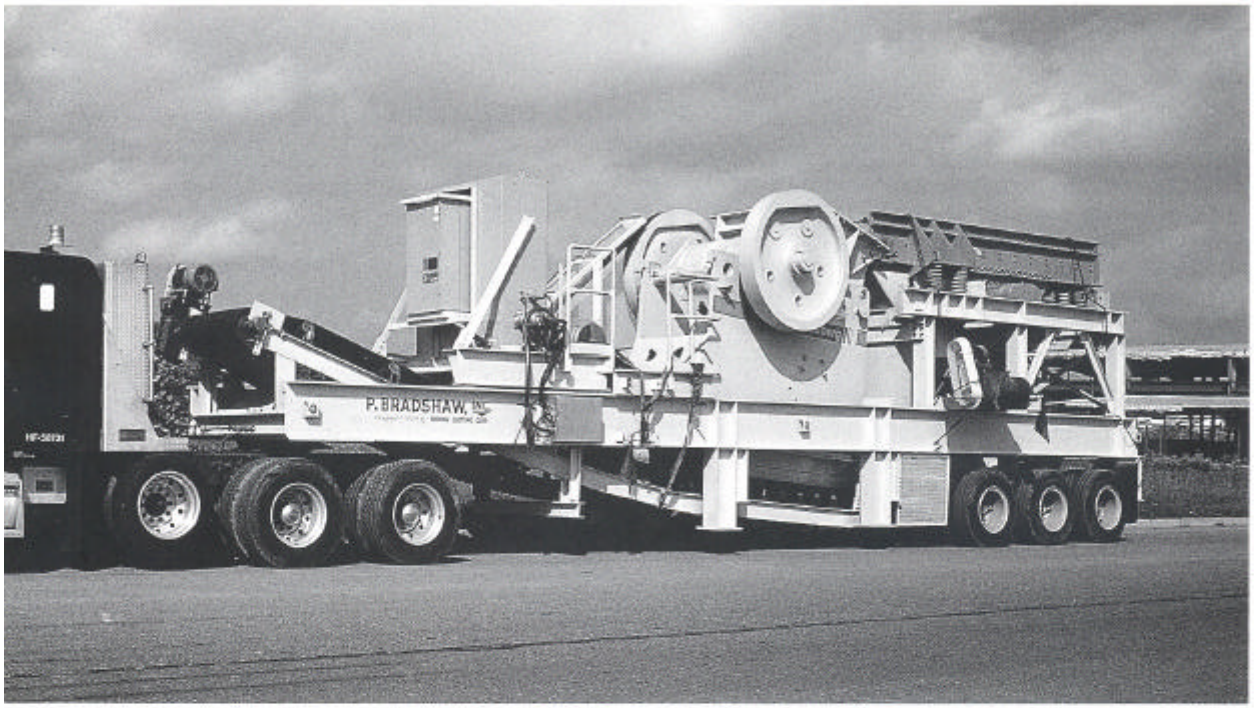
Type VFG-7224, 6' wide x 24' long, Deister Vibrating Grizzly Feeder with 16' long pan and 8' long grizzly section with spacing tapering from 6" at feed end to 11¾" at discharge end. Entire pan and sides underneath grizzly section are constructed of stainless steel, as pan is used to feed slag over large rotary magnet to remove steel particles from the slag. Oversize material consisting of large steel buttons and slag lumps go to waste.





Type VG-548

Type VG-548, 54" wide x 9'long, Deister Vibrating Grizzly, with 8' long step deck grizzly section, adjustable grizzly bars are crowned with manganese steel castings tapered from 4" wide at the feed end to 2½" wide at the discharge end, and tapered vertically, openings tapering from 3⅝" wide at the feed end to 5⅛" wide at the discharge end, ¼" thick feed plate protected by replaceable ¼" thick AR steel wear plate (removed in illustration), ⅜" thick sideplates protected by ⅝" thick AR steel replaceable wear plates. Vibrating mechanism equipped with 130 mm. SKF type EPVB (or equivalent) spherical roller vibrating screen bearings, external oil fill and drain plugs, oil level gauges and protected by a replaceable steel shield. Unit operates at 790 RPM. Included are the 10"-54 lb. wide flange H-beam base, adjustable trunnion support spring mounts, support springs, snubbers (friction checks), motor platform, heavy-duty pivoted motor base, wideband V-belt, sheaves, belt and flywheel guards (removed in illustration). Unit is inclined at 20°, weighing 13,400 lbs., powered by a 25 H.P. motor.



This triple-axle chassis, designed by Brooks Systems, Inc., incorporates a Deister Type VFGP-4216 (42" x 16') Vibrating Grizzly Feeder with a 5' grizzly section to provide scalping and feeding to a Nordberg VB-1008 jaw crusher.

When you need portability in your feeder-crusher operations . . . SPECIFY DEISTER VIBRATING FEEDERS FOR HIGH PRODUCTION AND LONG LIFE

The Deister Type VFGP Vibrating Grizzly Feeders are designed for use on portable feeding/crushing plants or lighter duty stationary type applications. These units are generally constructed with 18"-42.7 lb. ship channels, with 8"-22.8 lb. ship channels welded on top serving as the sideplates.

Depending on feeder width, the ⅝" thick pan is welded to 6"-25 lb. or 8"-35 lb. wide H-beams welded to ½" thick plates bolted to the sideplates for easy replacement.

½" thick AR steel replaceable wear plates protect the pan, sides above the pan and the sides above the grizzly section.

The grizzly bars are adjustable and crowned with 2" thick AR steel plate, tapered lengthwise and vertically, welded to 1" thick x 4" high steel risers welded to castings bolted to the 5" diameter (¾" thick wall) transverse support tubes. These tubes are welded to steel castings bolted to the sideplates for easy replacement.

Standard grizzly sections are 5' long with the grizzly bars tapering from 4½" wide at the feed end to 2½" wide at the discharge end, and set at a nominal 5" opening.

As standard equipment, support springs, lower mounting plates and spring seats, snubbers (friction checks), Deister heavy-duty pivoted motor base, "C" section drive and driven sheaves, and wideband V-belt are included.

The Type VFGP feeders are generally constructed with both the pan and grizzly section installed horizontally, but can be constructed with either the pan, grizzly, or both declined in order to meet tonnage or material requirements. General operating characteristics are ½" stroke with a speed of 760 RPM.

DEISTER
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SAND STONE GRAVEL
FOUNDER

DEISTER MACHINE COMPANY, INC.
P.O. Box 1 • Fort Wayne, Indiana 46801 • Phone (260) 426-7495 • FAX (260) 422-1523 • E-Mail dmco@gte.net • www.deistermachine.com

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