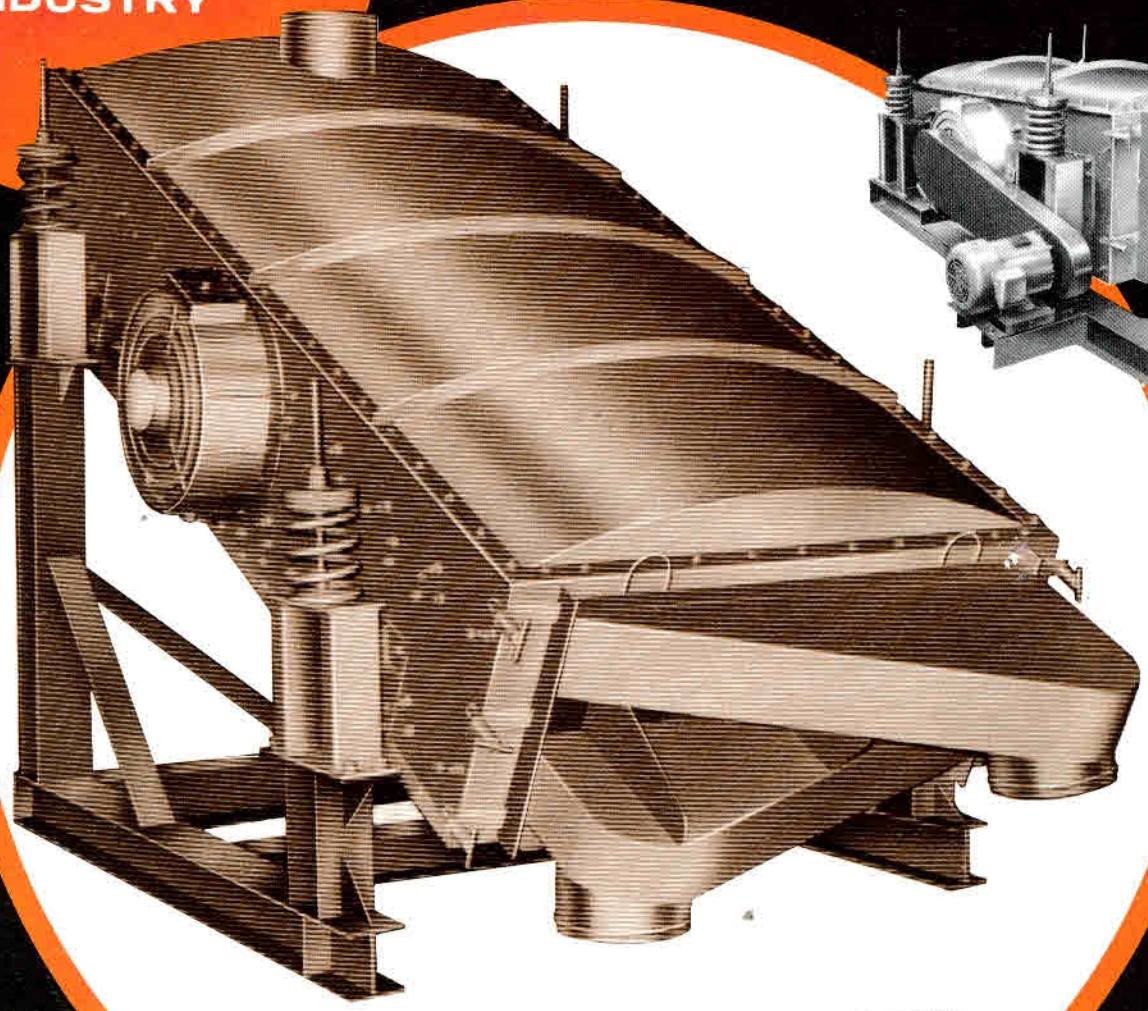
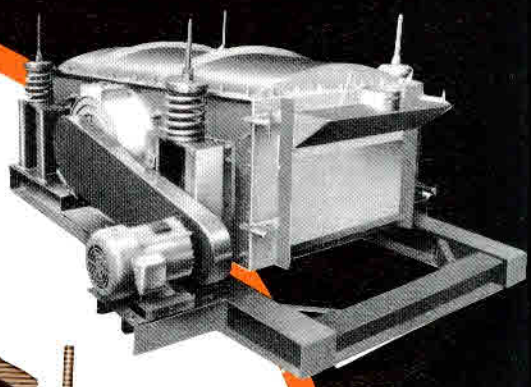
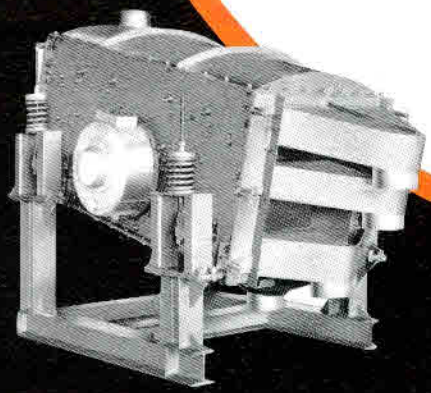
DESIGNED FOR THE GRAIN and FEED INDUSTRY

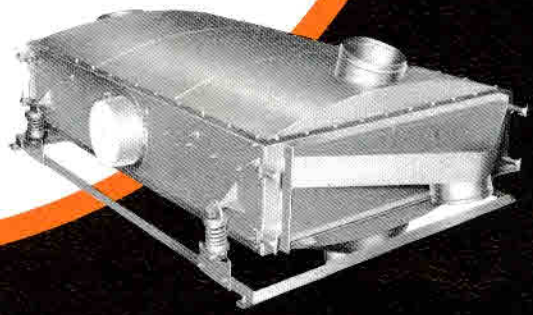
PRATER *Blue Streak*

CLEANER/SCREENER





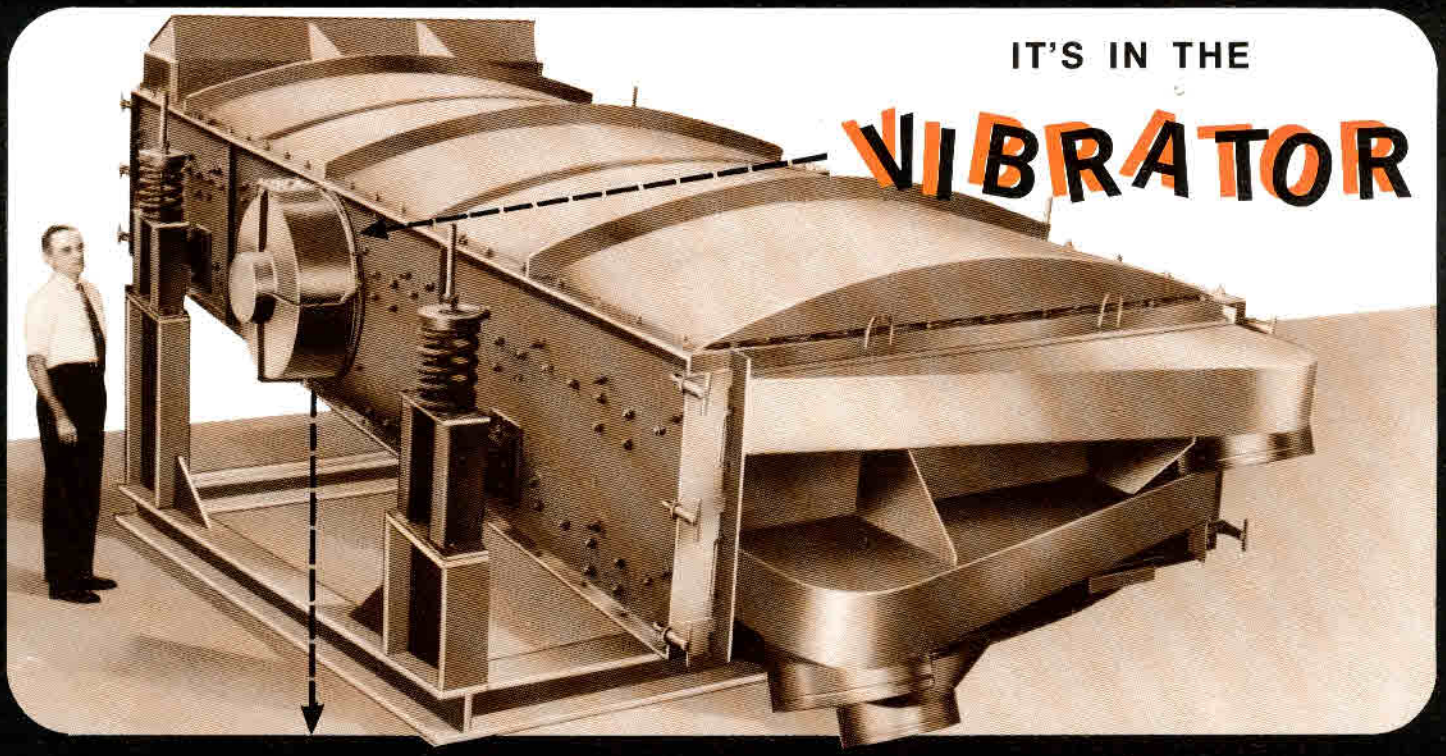




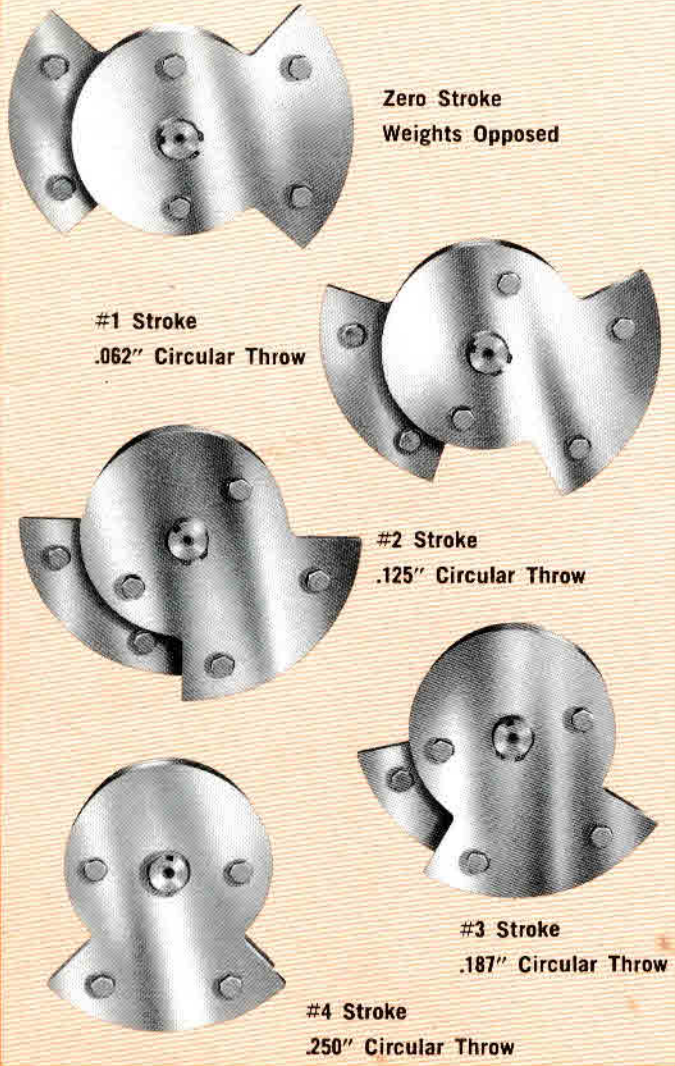
The Cleaner/Screener with *the* Adjustable Positive Eccentric Action—available in totally enclosed Dust-Tite construction.

CLEANS SCALPS & SIZES GRAIN, FEED, PELLETS & CRUMBLES

WHAT ADJUSTABLE POSITIVE ACTION MEANS



ECCENTRIC ADJUSTMENT



Of the five variable features designed into each Prater Vibrating Screen, the adjustable, positive eccentric is the most unique, and is therefore deserving of special attention and explanation. By means of this design innovation, it is possible for the operator to set the stroke or amplitude of the machine to any one of five positions from 0 to ¼" maximum circular throw on the Model VS1 unit, and 8 positions from 0 to ⅜" maximum circular throw on the VS2 -3 -4 models.

All products do not necessarily respond in the same way to one fixed amplitude, and for this reason, a degree of adjustability is highly advantageous, and in many instances, absolutely essential for the efficient functioning of the machine when handling any specific product. This feature alone sets the Prater Vibrating Screen above and apart from other similar equipment employing mechanically induced vibratory motion.

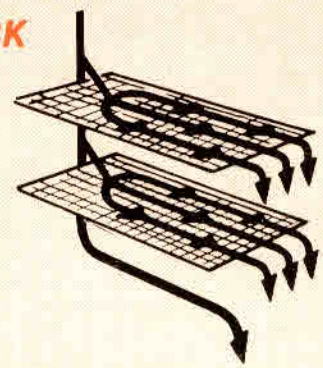
The series of five photographs appearing at the left illustrates the relative positions of the split eccentrics for each of the five possible settings of a Model VS1 Vibrator. There is one set of split eccentrics on each side of the machine, and each must be set for the same stroke, otherwise the screen will function in an erratic manner with the material to be screened being thrown to the side of the lesser stroke.

Adjustment of the amplitude or stroke is really quite simple and does not require special tools. An ordinary wrench is all that is needed. Once the eccentrics have been moved to the desired position, they are locked in that position by two screws in the Model VS1, and four screws in the Model VS2 -3 and -4 vibrators.

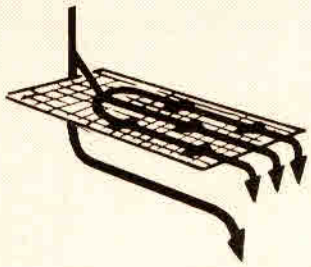
When Prater application engineers conduct a vibrating screen test on your product, the proper stroke, speed, pitch, direction of rotation, and screening media are determined. This means that when your new Prater Screen reaches you for installation, all of the variables will have been determined in advance. Consequently, there are very few instances in which fine tuning in the field becomes necessary. However, should this be required for any reason, a Prater service engineer is available to assist you.

A MODEL and SIZE FOR EVERY APPLICATION

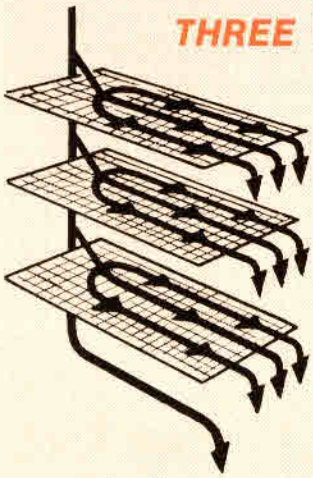
TWO DECK



ONE DECK



THREE DECK



The Prater Blue Streak Cleaner/Screener is readily available in 30 different sizes and 1, 2 or 3 deck models. Special sizes and extra decks are also available for special applications or very large capacity requirements.

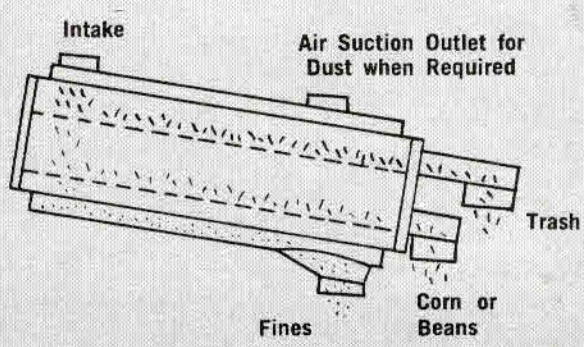
The one deck Cleaner/Screener is used for scalping and removing trash and F.M. The two deck unit is for scalping and cleaning. The three deck unit can be used to handle different types of products without changing screens.

The Prater Blue Streak Cleaner/Screener is available in **Totally Enclosed Dust-Tite Construction.** A slight air suction can be applied directly to the unit to remove dust. This prevents dust from passing through with the product.

A partial list of products handled are Corn, Beans, Pellets, Crumbles, Oats, Wheat, Soybean Meal, Finished Mash Feed, Barley, Milo, Sunflower Seeds, Range Cubes, etc. . . .

A PARTIAL LIST OF BLUE STREAK CLEANER/SCREENER USERS INCLUDES: CARGILL • CENTRAL SOYA • CONAGRA • O. A. COOPER COMPANY • FARMLAND INDUSTRIES • QUAKER OATS • RALSTON PURINA.

HOW THE PRATER Blue Streak CLEANER/SCREENER WORKS

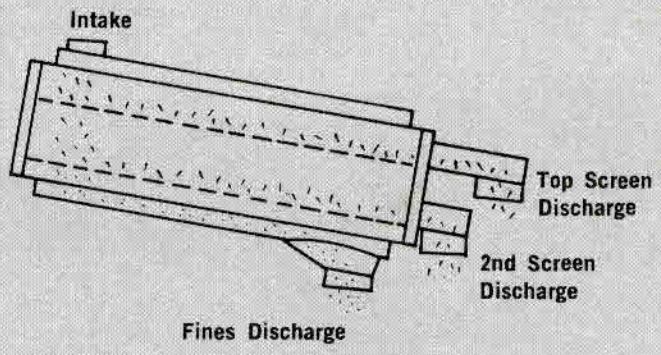


SCALPING and CLEANING GRAINS

1—Cobs, tramp iron, large trash material is removed off the top screen

2—Good clean Grain discharges off bottom screen

3—Beeswings, Excretia, Dirt and Fines pass through bottom screen and out discharge



SEPARATING FINES FROM PELLETS OR CRUMBLES

1—**PELLETS** pass over the top screen where fines are removed

2—**CRUMBLES** pass through the top screen and over the bottom screen for removal of fines—without changing screens.

3—**FINES** pass through screens and out bottom discharge

HERE'S HOW

THE VARIABLES IN THE PRATER BLUE STREAK CLEANER/SCREENER COMBINE TO ASSURE HIGHEST CAPACITY AND MAXIMUM CLEANING ABILITY.

Basically, a material that is to be screened must be vibrated sufficiently to— (#1). open up the mass, and (#2). stratify the particles thus enabling the fines to work down to the screen cloth and pass through. Accordingly, in analyzing a screening requirement, it is necessary to determine the properties of the material to be screened, and to consider the physical and mechanical factors which are required to accomplish the specified separation, and then to compare these factors with the fixed or variable features of the machine, which are available for application.

Since it is usually difficult to predetermine all of the factors influencing a specified separation, the variables available are highly important. There are five variables in the Prater Vibrating Screen. These are listed below, along with the effect of each, and the means by which adjustment is made.

AMPLITUDE OR STROKE . . . opens up the mass of the material being screened and permits stratification. Adjustment of stroke provides control over the motion imparted to the material, eliminates mesh hopping, etc., depending on the size and nature of the particles in the material. The stroke is adjustable on Prater Screens from 0 to ¼" maximum throw in the Model VS1 unit, and from 0 to ⅜" maximum throw in the VS2 -3 and -4 Screens, and the effectiveness of each stroke can be altered by a change in speed.

FREQUENCY OR SPEED . . . . is a less significant factor in separation (within ranges of 100 RPM), but has an important relationship to stroke—lower stroke at high speed, and greater stroke at low speed. Usual speed range from 900 to 1500 RPM (frequency in VPM), and Prater Screens can be operated at any speed within this range.

PITCH OR SLOPE . . . . . . governs the rate of flow and controls distribution of material over the screen area. Pitch has an important relationship to direction of rotation as described below. Pitch must be taken into consideration when designing the base structure or suspension, but is adjustable on Prater Screens in the spring mounting brackets.

DIRECTION OF ROTATION . . determines whether the motion imparted to the material being screened will be counter-flow—that is, uphill motion, downhill flow—or with flow—downhill motion, downhill flow, and along with the Screen pitch, provides the action necessary to retain the fines while removing oversize particles rapidly. Direction of rotation and adjustable pitch provide control, which will make maximum flow capacity available at a required separation efficiency. Direction of rotation on Prater Screens is changed by reversing the motor rotation.

SCREENING MEDIA . . . . . . selection for a specified separation should fundamentally be that material which has the maximum open area consistent with reasonable screen life. Prater machines use essentially any media available; perforated plate—wire and synthetic mesh—rod screens—bar screens, etc. Special backings and coatings are available where needed. Prater screen cloth is provided with bindings, depending on the particular mesh size and fabric, and are held in the machine by adjustable tension bars.

Special aids have been developed to effectively deal with such problems as blinding, balling, blanketing, or clogging due to moisture, static electrical charges, or any other physical property of the material being processed. Add to this the fact that Prater Vibrating Screens will handle products ranging in temperature from —150°F. to 1700°F., and at pressures up to 15 PSIG and you have a tremendous range of application.

In the literature we list a great many products which have been screened on Prater equipment, and ratings for many more are available. Should you find a possible application for a product which we have not handled previously, there are full testing facilities available at Prater headquarters in Chicago, where your product can be screened and recommendations made immediately. There is no charge for this service other than sending your material to us freight prepaid.

The Prater Vibrating Screen offers a safe, modern, dependable method of upgrading the quality of your sized or separated products. Why not ask for a demonstration?

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