HEAVY DUTY INCLINED VIBRATING SCREENS
With rising production costs, more rigid specifications and stiffer competition, it takes the best screening equipment to meet the challenge – big capacity, cost cutting, hard working Deister screens – of the proper size and type, and designed specifically to fit your application. Whatever the specification or material type, Deister engineers will find the right solution for you.

Ruggedly built and requiring minimal maintenance, Deister screens deliver unmatched precision performance day after day and year after year. Extra protection is provided at all vital points, and quantity-controlled oil lubrication ensures long bearing life – and dependable production even under adverse operating conditions, or when handling the most abrasive material types.

And, Deister screens are backed by a follow-through parts and service policy without equal – for Deister top management is personally interested in the continued profitable operation of every Deister screen.

Deister Vibrating Screens have many outstanding features which are standard on each unit:

Note: Throughout this bulletin, many of the products have belt and flywheel guards removed to show the drives.
**Standard Equipment**
- Oil lubricated vibrating mechanism
- Steel coil spring suspension system
- Snubbers (friction checks)
- Pick-up brackets and cable suspension lugs
- “Automatic” spring-tension screen cloth tensioning device
- Tension plates of exclusive design
- Interchangeable screen panels
- Bolted construction for easy replacement of wear parts
- Access ports
- Discharge lips
- Removable back plates, or rubber flaps, completely seal feed end
- Adjustable throw
- Sideplates reinforced with $\frac{5}{8}" \times \frac{3}{4}"$ vertical braces ($\frac{5}{8}"$ thick sideplates standard on 3', 4' & 5' wide models; $\frac{3}{4}"$ thick side plates standard on 6', 7', 8' & 10' wide models)

**Optional Equipment**
- Wide-flange H-beam base
- Feed box
- Oil filtration system
- Spring covers
- Snubber guards
- Motor mount, V-belt drive, and guard
- Spray pipe holes
- Spray pipe equipment
- Turbo washer troughs
- Horizontal sub-base
- Dust enclosure
- Ball tray decks
- Heated decks
- Extra Heavy Duty (XH) Models
- Rubber coating on exposed surfaces
- Tension wedges for screen cloth tensioning
- Rubber splash curtain
- A-R steel, rubber or urethane wear liners
- Rubber- or urethane-covered tension plates
- Manganese and A-R steel wear plates for tension plates

**Explanation of Model Letters**
- **B**: H-Beam Base
- **H**: Heavy Duty Inclined
- **T**: Top Mounted Vibrating Mechanism
- **M**: Middle Vibrating Mechanism
- **CS**: Cable Suspended Unit
- **XH**: Extra Heavy
- **P**: Portable Plant Type

**Explanation of Model Numbers**
- **FIRST**: Number of Decks
- **NUMBER**: Width in Feet
- **THIRD & FOURTH NUMBERS**: Length in Feet

Example: BHM-3820
- H-Beam Base; Inclined; Middle Vibrating Mechanism; Three Decks, 8' wide x 20' long.

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**Type BXHM-3616**
- 3 Deck 6' x 16'

**Discharge lips on all decks included as standard; also available with replaceable steel or rubber liner as shown**
DEISTER UNITIZED LONG-LIFE VIBRATING MECHANISM

An outstanding feature of the **Type T** Deister Vibrating Screen is the exclusive “unitized” vibrating mechanism mounted on top of the vibrating frame.

The entire vibrating mechanism is a precision constructed, jig assembled unit, which 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 oil and entrance of dirt.

The lower portion of the shaft casing tube serves as the oil reservoir across its entire length. The oil is agitated by slingers on the eccentric shaft and constantly envelops the spherical roller bearings and all moving parts. It should never be necessary to add oil to the mechanism, with only periodic oil changes recommended. Renewable sleeves between the inner race of the bearing and the shaft prevent wear on the shaft. Should wear on the sleeve occur, even after years of rugged service, the original close “factory tolerances” can be easily restored by the simple replacement of the renewable sleeve.

Since 1926, Deister has always designed its vibrating mechanisms with the bearing a slip fit on the replaceable sleeve, and a press fit in the housing. The replaceable sleeve is a slip fit on the shaft. Slip fits assure more even wear on the bearings and sleeves – providing longer life and easier replacement.

The vibrating mechanism is demountable and readily interchangeable. Where a number of the same size screens are in operation, the “unitized” mechanism can be unbolted and attached to another frame without disturbing any of the internal clearances of the shaft and bearings. The large diameter shaft casing tube, welded or bolted to 3⁄8", 3⁄4", or 1" thick housing plates, maintains proper alignment of the entire assembly.

Stroke (throw) adjustments can be made in the field by simply adding or removing counter-weight plates to/from the unbalanced fly wheels.

**Type M Vibrating Mechanism**

The vibrating mechanism is located between the decks on all **Type M** units, regardless of size. Since it is not economically feasible nor practical from an engineering standpoint, the vibrating mechanism is located between decks on all units longer than 16' or on most units that are 7', 8', or 10' wide.

The vibrating mechanism mounted between decks incorporates all the features of the Type T top-mounted mechanism, with the exception of the “unitized” feature. The steel tube shaft casing is protected by the standard 3⁄8” thick steel-backed rubber tack-welded to the tube, or a replaceable steel shield or thicker rubber when required.

The **Type M** mechanism produces a uniform true circle movement of the vibrating frame and screening surface.

Dual vibrating mechanisms are standard on 2 and 3 deck, 8' x 20'; and on 2 deck, 8' x 24' screens. Triple vibrating mechanisms are standard on 3 deck 8' x 24' and larger units. The two shafts of the dual mechanism are each individually motor driven while the triple mechanism is driven on the feed end and discharge end shafts. Timing belts on the dual and triple mechanisms prevent any non-synchronous motion.

**Slingermist Lubrication**

Deister’s exclusive slingermist lubricating system makes it possible for Deister screens to operate at higher speeds and at lower operating temperatures. This system is the ultimate in oil lubrication of anti-friction bearings and assures safe operating temperatures under extremely hot climatic conditions where it, in effect, acts as an oil cooling system.
DEISTER OPPOSED ELLIPTICAL THROW

The Type T Vibrating Screens feature Deister’s powerful positive opposed elliptical throw action, which permits the screens to be operated at a flatter screening angle by controlling the movement of material on the screen for the greatest speed and efficiency in sizing. Note from the diagram below that the path of travel at any point on the surface of the screen cloth nearer the feed end takes the form of an ellipse which revolves and leans toward the discharge end of the screen. As the discharge end is approached and the surface of the cloth takes a steeper slope, this elliptical path, while revolving in the same direction as before, leans back toward the feed end of the machine.

The small arrows alongside the ellipse show graphically the accelerating or forward conveying motion on the flatter sections of the screen and the retarding effect, or backward thrust, of the same force on the steeper sections.

To further improve the efficiency of Deister Type T Screens, adjustable slope panels are provided as standard equipment with the unit. This feature permits the slope of the screen cloth panels to be independently adjusted at both the feed and discharge ends in order to increase or decrease the screening angle. If it is desirable to accelerate the movement of the feed coming onto the screen in order to thin out the bed and provide even quicker stratification, the adjustable panel permits the required increase of slope. If it has been found that at the discharge end of the screen, where the bed has thinned out, that the particles have a tendency to pass over the screen a little too rapidly, travel at the discharge end can be slowed or retarded by decreasing the slope of the end panel.

Access Ports
Access Ports (hand-holes) are provided on multiple deck units to permit removal and replacement of any one screening surface without disturbing the other decks and eliminating the necessity of a person or persons between decks when "hold-downs" are not used. These ports with doors removed, also provide the operator easy inspection of the screening surface to check deck wear, possible blinding or plugging, depth of bed, or any matters connected with the operation of that particular deck.

These oval-ended rectangular openings, 5" x 10", are reinforced with ½"-thick 7" x 13" steel frames welded to the sideplates. Easily removed plates cover the openings.
DECK SURFACE TENSION SYSTEMS

Figure 1: Standard “automatic” spring tension assembly for 3’, 4’, 5’ & 6’ wide models. Powerful coil tension springs and tension plates hold the screen cloth over a series of support bars arranged in an arc. Support spacing is governed by size of opening and shape of screening media. As the screen cloth wire wears thin or becomes stretched, the springs automatically keep the cloth in constant tension, thereby preventing the whipping or flexing of the cloth that causes wire breakage. The side opposite the spring is held by a half-sphere cast iron nut with indentations fitting the lugs on the steel casting welded to the sideplate, which prevent the nut from backing off.

Ledge angles are formed to 94º to provide the correct interlocking fit between tension plate, screen cloth hook strip, and the supporting ledge angle – to prevent the pinching or “rocking-up” of the screen cloth in the hook-strip area, which causes premature breakage.

Fewer tension assemblies are required due to the stronger curved tension plates. The method shown in Figure 1 is recommended for medium and fine screen cloth or lightweight perforated plate.

All assemblies (Figures 1 through 7) are interchangeable, as holes and castings in sideplates are identically located.

Figure 2: Standard heavy duty tension assembly for heavy wire cloth or perforated plate with hook strips.

Figure 3: Optional tension wedge assembly – interchangeable with all assemblies (Figures 1 – 7) by substitution of forged slotted bolt, spherical washer, and wedge, using the same holes and steel casting in sideplate as above, with same tension plate.

Figure 4: Optional tension wedge and “rubber spring” assemblies combine advantages of both types illustrated in Figures 1 and 3; and same specs as Figure 3 with addition of “rubber spring.” Wedges held firmly in place by spring action with constant attention unnecessary.

Figure 5: Standard “automatic” spring tension assembly at both side plates with dual center support bars and center hold down.

Figure 6: Standard “automatic” spring tension assembly for 7’, 8’ & 10’ wide units – double crown with split screen cloths – downward hooks in center with molded rubber (as shown) or steel “bolted-type” cover strip – provides easier replacement, even flow of material over entire width of unit, better tensioning capability giving longer screen life. Standard heavy duty (Figure 2) or tension wedge (Figures 3 & 4) can also be used with this type construction.

Figure 7: Standard heavy duty tension assembly (See Figure 2) for use with profile wire panels. Standard hold-down strips. Standard tension plates are available with abrasion-resistant rubber wear surface, ¼” x 1¼” manganese steel wear surface or with A-R steel formed wear plates welded to tension plate.
TYPE BHT-2716
2 Deck 7’ x 16’
Rinsing Screen with modular rubber on top deck and modular urethane on the bottom deck; spring covers; and horizontal sub-base.

TYPE BHM-3820
3 Deck 8’ x 20’
Rinsing Screen with dual vibrating mechanisms; and modular urethane.
Snubber

Snubbers (friction checks) are an important part of any “base-mounted” type unit, as can be seen by illustrations on this and other pages. The spring-loaded horse-shoe-shaped arm comes in contact with the pin extension only when the vibrating frame passes through the critical speed area on startup and shutdown. The snubbing action prevents the live frame from hitting chutes or any stationary structural members during this period, in addition to dampening possible excessive vibration transmission at the same time.

Side Motor Mount

The side-mounted motor drive consists of a motor platform bolted to the H-beam base, Deister rubber torsion pivot motor base, wide-band V-belt, motor sheave, and belt and flywheel guard. The motor(s) may be mounted for either right-hand or left-hand drive.

Tension Wedge

The Deister Tension Wedge and “Rubber-Spring” screen cloth tensioning device offers the advantage of quick tightening or easy release, while providing constant tension through the action of the molded rubber spring.

Overhead Motor Mount

The overhead motor drive consists of a motor support mounted on the H-beam base, adjustable motor platform, Deister rubber torsion pivot motor base, V-belts, motor sheave and belt guard. The motor may be mounted for either right-hand or left-hand drive and can be changed at any time. Where necessary, the platform can have an overhanging offset to either side. The driven sheave is bored eccentrically to help compensate for the vibrating action. See additional illustration on page 5.

Cable Suspension from H-Beam Base

Steel cables or rods can be attached directly to the lugs on the H-beam base. The effectiveness of the spring mounts in conjunction with the base eliminates the need for overhead suspension springs. See illustration on page 2.
Snap-On Rubber Center

Deister “snap-on” molded rubber center hold-down strip generally used on most 7’, 8’ & 10’ wide screen cloth applications, eliminating the bolted cover strip.

TYPE HM-2620
2 Deck 6’ x 20’
Heavy duty tension assemblies; replaceable A-R steel wear plates on both decks; discharge lips, and feed box; reinforced tension plates; heavy duty center hold-down on top deck.

TYPE XHM-4824
4 Deck 8’ x 24’
Extra heavy duty; triple-shaft vibrating mechanism; top deck for bolt-down media.
Spray Pipe Equipment
Deister screens can be equipped with specially designed spray equipment – stationary supporting brackets and 2” pipe headers fitted with threaded spray nozzles, and complete manifold systems. The supporting framework is welded to the H-beam base, with the individual headers resting on small UHMW blocks to allow for height adjustment. Where the headers pass through the sideplates between decks, the round hole in the sideplate is reinforced by a ¾” thick steel ring welded to the plate. The opening is sealed by a polyurethane flange that fits over the spray pipe and is placed against the reinforcing ring.

The brass, steel or urethane nozzles fan out water jets into sheets, which provide broad bands entirely across the screen, giving complete coverage under each header. The nozzles are “staggered” in order to provide two solid sheets of water per header.

Complete manifold systems including all piping, fittings, and individual brass gate valves for each header, mounted on the H-beam base, can be furnished as optional equipment.

Spray Pipe Holes
Spray pipe holes can be provided for operator installation of spray pipes or for possible future addition of spray equipment. The holes in the sideplate are 8” in diameter with a ¾”-thick steel ring 12” in diameter welded to the sideplate. This ring may be drilled and tapped to accommodate capscrews fastening a steel cover-plate until future installation of spray pipe equipment.

TurboWasher
The Deister TurboWasher screen is designed for maximum efficiency in screening fine materials. The TurboWasher incorporates V-shaped troughs in the deck separated by screen media panels.

Water sprays mounted above these repulping troughs increase the mixing and scrubbing action, releasing additional fines. These are then carried through the screen section immediately following the TurboWasher trough.

Horizontal Sub-Base
For ease of installation and/or to provide a collecting hopper for undersize material, a horizontal sub-base can be furnished – either “open” (without sides or back) or totally enclosed types. It is constructed of 8” x 8” x ½” structural angle welded framework, either welded or bolted to the standard wide-flange H-beam base, depending on customer preference or over-the-road shipping height limitations.

If enclosed, the backplate can be installed vertically or at an angle. If angled, it is constructed of ¾”-thick A-R steel. The standard sides are 10-gauge steel.

See page 7 also.
TYPE BHM-2820
2 Deck 8’ x 20’
Equipped with dual vibrating mechanisms; heated bottom deck

TYPE BXHM-2616-G
2 Deck 6’ x 16’
Extra Heavy Duty Screen; equipped with bolt-down rubber perforated plate; adjustable grizzly section

TYPE BHM-3824D-03T
3-½ Deck 8’ x 24’
Equipped with triple shaft vibrating mechanism; combination modular rubber and side-tension screen cloth on top deck; steeper incline on bottom deck
ENCLOSED SCREENS

Ball Tray Decks

The ball tray is used as a means of reducing or eliminating blinding of the meshes in the screen cloth, usually in the bottom deck. It consists of a wire cloth panel or perforated plate with relatively large openings placed beneath the screen cloth, and the space between divided into compartments for the purpose of carrying resilient rubber cleaning balls. The vibration of the screen causes the balls to bounce up against the underside of the screen cloth, driving out the near-size irregular shaped particles wedging in apertures, as well as creating a secondary vibration in the screen cloth that prevents fine particles from sticking and building up on the wires. In most cases, a ball tray will be effective with material containing as much as 5% moisture.

Where dust or noise is a problem, or where regulations require such control, Deister Vibrating Screens are available in partially or fully enclosed models. The removable enclosure panels or covers are held firmly on the stationary frame by spring-loaded knock-around fasteners, which are easily removed in seconds for access to any part of the screen. Enclosed units can be furnished with or without the totally enclosed horizontal sub-base.

**TYPE BHM-3820-E**
3 DECK 8' x 20'
Fully Enclosed Screen equipped with dual vibrating mechanism

**TYPE BHM-3824-03T-E**
3 Deck 8' x 24'
Fully Enclosed Screen equipped with rubber canopy-style dust enclosure; triple shaft vibrating mechanism
As the vibrating frame gets larger, a third shaft allows for smaller bearings to be used and higher operating speeds attained, due to the extra set of bearings. This means that the screening capacity and efficiency per square foot of the larger machines is comparable to the smaller machines.

**TYPE BHM-31024-03T**

3 Deck 10' x 24'
Washing Screen

Equipped with triple-shaft vibrating mechanism located between the top and middle decks

**TYPE BHM-31020-03T**

3 Deck 10' x 20'
Washing Screen

Equipped with triple-shaft vibrating mechanism located between middle and bottom decks
CAPACITY OF DEISTER VIBRATING SCREENS

The capacity of a vibrating screen is governed by many factors, among which are: type of material, amount of oversize material, undersize material, moisture content, shape of particles, amount of near-size material, percentage of open area of the screening medium, and others. In addition, there are numerous variables which cannot be determined in advance. Non-uniform feed rate, surge loads, changes in crusher settings, and fluctuating moisture content are factors which will affect vibrating screen capacity.

To more accurately determine the size of vibrating screen needed, we recommend using the following three capacity calculations: through-flow tonnage, feed tonnage, and depth of material bed.

For multiple deck units, the screen cloth area for each deck must be figured separately. The deck requiring the greatest area determines the size of screen needed. The screen selected should be large enough to allow for a margin of safety.

1) Through-flow Tonnage Method
To determine the size of screen, obtain screen cloth area (S) needed by dividing the through-flow tonnage (T) by factors A, B, C, D, E & F.

\[ S = \frac{T}{A \times B \times C \times D \times E \times F} \]

Factor A – Capacity in TPH passing through 1 sq. ft. of screen cloth based on 94% efficiency with 25% oversize.

<table>
<thead>
<tr>
<th>Size of Sq. Opening</th>
<th>Factor A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot;</td>
<td>.90</td>
</tr>
<tr>
<td>3/16&quot;</td>
<td>1.12</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>1.35</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>1.55</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>1.75</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2.00</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>2.25</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2.42</td>
</tr>
<tr>
<td>1&quot;</td>
<td>2.70</td>
</tr>
<tr>
<td>1-1/4&quot;</td>
<td>2.90</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>3.20</td>
</tr>
<tr>
<td>2&quot;</td>
<td>3.62</td>
</tr>
<tr>
<td>2-1/2&quot;</td>
<td>4.00</td>
</tr>
<tr>
<td>3&quot;</td>
<td>4.40</td>
</tr>
<tr>
<td>4&quot;</td>
<td>5.60</td>
</tr>
<tr>
<td>5&quot;</td>
<td>6.40</td>
</tr>
<tr>
<td>6&quot;</td>
<td>7.50</td>
</tr>
<tr>
<td>7&quot;</td>
<td>8.30</td>
</tr>
<tr>
<td>8&quot;</td>
<td>9.00</td>
</tr>
<tr>
<td>9&quot;</td>
<td>9.80</td>
</tr>
</tbody>
</table>

Note: Factor C – Slight inaccuracies are seldom objectionable in screening aggregate and perfect separation (100% efficiency) is not consistent with economy. For finished products, 98% efficiency is the extreme practicable limit and 94% is usually satisfactory, while 60% to 75% efficiency is usually acceptable for scalping purposes.

Factor E – If material is dry, use factor 1.00. If there is water in the material, or if water is sprayed on the screen, use proper factor given above. Wet screening means the use of about 3 to 5 GPM of water per ton of material per hour. Rinsing requires about 1 1/2 to 3 GPM per ton of material per hour.

The above areas are approximate for feeds containing up to 60% of oversize and having 50% of the undersize smaller than one-half the screen opening.

2) Feed Tonnage Method

\[ S = F \times C \quad (S = \text{Screen cloth area} \quad F = \text{TPH feed}) \]

C = Square Feet of Screen Surface for each TPH of feed.

<table>
<thead>
<tr>
<th>Size of Sq. Opening</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
<th>5/8&quot;</th>
<th>3/4&quot;</th>
<th>7/8&quot;</th>
<th>1&quot;</th>
<th>1-1/4&quot;</th>
<th>1-1/2&quot;</th>
<th>1-3/4&quot;</th>
<th>2&quot;</th>
<th>2-1/2&quot;</th>
<th>3&quot;</th>
<th>3-1/2&quot;</th>
<th>4&quot;</th>
<th>5&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 lb/cu.ft. material</td>
<td>.56</td>
<td>.45</td>
<td>.4</td>
<td>.34</td>
<td>.3</td>
<td>.26</td>
<td>.25</td>
<td>.23</td>
<td>.2</td>
<td>.19</td>
<td>.18</td>
<td>.16</td>
<td>.15</td>
<td>.14</td>
<td>.12</td>
<td>.10</td>
</tr>
</tbody>
</table>

The above areas are for feeds containing up to 60% of oversize and having 50% of the undersize smaller than one-half the screen opening.

3) Depth of Bed Method

In general, depth of bed of material on the screen deck should not exceed 4 times the size of the openings in the screen for materials weighing 100 lb/cu.ft., and 2 1/2 times or 3 times for material weighing 50 lb/cu.ft.

\[ D = \frac{T \times K}{5 \times S \times W} \]

D = Depth of material in inches
T = TPH over screen deck
K = Number of cubic feet per ton of material
S = 70 fpm
W = Net width of screen in feet (nominal width minus 6")
Example:
What size vibrating screen is required to handle a feed of 150 TPH of stone from a crusher set at \(\frac{3}{4}\); and make a \(\frac{1}{2}\) and \(\frac{1}{4}\) separation at 94\% efficiency?

**Crusher Product Sizes**

<table>
<thead>
<tr>
<th>Size</th>
<th>Feed Tonnage</th>
<th>Under Tonnage</th>
<th>Over Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\frac{3}{4})%</td>
<td>1%</td>
<td>1.5 tons</td>
<td>61.5 tons</td>
</tr>
<tr>
<td>(-\frac{1}{4})%</td>
<td>13%</td>
<td>19.5 tons</td>
<td>88.5 tons</td>
</tr>
<tr>
<td>(-\frac{1}{4})%</td>
<td>13%</td>
<td>19.5 tons</td>
<td>49.5 tons</td>
</tr>
<tr>
<td>(-\frac{1}{4})%</td>
<td>14%</td>
<td>21.0 tons</td>
<td>39.0 tons</td>
</tr>
<tr>
<td>(-\frac{1}{4})%</td>
<td>19%</td>
<td>28.5 tons</td>
<td>49.5 tons</td>
</tr>
<tr>
<td>100%</td>
<td>150.0 tons</td>
<td>28.5 tons</td>
<td>32% of 88.5 tons feed to (\frac{1}{2})&quot; deck</td>
</tr>
<tr>
<td>less than (\frac{1}{4}) size of (\frac{1}{4})&quot; opening</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) **Through-flow Tonnage Method**

To determine the size of screen, obtain screen cloth area \(S\) needed by dividing the through-flow tonnage \(T\) by factors A, B, C, D, E & F.

\[
S = \frac{T}{A \times B \times C \times D \times E \times F}
\]

<table>
<thead>
<tr>
<th>Factor</th>
<th>(\frac{3}{4})&quot;</th>
<th>(\frac{1}{2})&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.75</td>
<td>1.10</td>
</tr>
<tr>
<td>B</td>
<td>0.95</td>
<td>0.93</td>
</tr>
<tr>
<td>C</td>
<td>1.05</td>
<td>1.05</td>
</tr>
<tr>
<td>D</td>
<td>0.86</td>
<td>0.84</td>
</tr>
<tr>
<td>E</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>F (top)</td>
<td>1.00</td>
<td>0.90</td>
</tr>
</tbody>
</table>

\[
S = \frac{88.5}{1.75 \times 0.95 \times 1.05 \times 0.86 \times 1.00 \times 1.00} = 59 \text{ sq. ft.}
\]

\[
S = \frac{49.5}{1.10 \times 0.93 \times 1.05 \times 0.84 \times 1.00 \times 0.90} = 61.1 \text{ sq. ft.}
\]

2) **Feed Tonnage Method**

Feed factor to \(\frac{1}{2}\)" = .4
Feed factor to \(\frac{1}{4}\)" = .56

\[
S = FC
\]

\[
S = 150 \text{ tons} \times 0.4 = 60 \text{ sq. ft.}
\]

\[
S = 88.5 \text{ tons} \times 0.56 = 50 \text{ sq. ft.}
\]

3) **Depth of Bed Method**

\[
D = \frac{T \times K}{5 \times S \times W}
\]

\[
D = \frac{61.5 \times 20}{5 \times 70 \times 4.5} = .78^* \text{ (Less than two times size of opening)}
\]

\[
D = \frac{39 \times 20}{5 \times 70 \times 4.5} = .495^* \text{ (Less than two times size of opening)}
\]

**TYPE BHM-3824-03T**

3 Deck 8' x 24'
Washing Screen

Equipped with triple shaft vibrating mechanism located between the top and middle decks; rubber splash curtain
Since 1912, Deister has maintained its tradition as the leading manufacturer of vibrating screens and feeders – through customized solutions and a solid focus on putting the customer first.

Our customer relationships – developed over years of intense support, consultation and service – have resulted in ongoing improvements in the design, engineering and customization of Deister feeding and screening equipment.

Teamwork, leadership and valued customer relationships – that’s our standard of excellence since 1912.