UNPARALLELED DESIGN FEATURES

**HEAVY DUTY CONSTRUCTION** guarantees long life and excellent field performance. Ductile iron castings, steel end covers and high alloy fasteners are just some of the unique design features. All units can be mounted horizontally or vertically.

**LONG LIFE BEARINGS** insure peak, long-term performance. The B-10 bearing life is unsurpassed in the industry. The smaller units are furnished with ball bearings which are sealed for the life of the bearing. Larger units employ both ball and roller bearings with grease fittings.

**0% TO 100% FORCE ADJUSTMENT** is available on all but the smallest model. Many competitive units offer models with limited “continuous duty” force settings. All SEE and KEE models are rated for continuous duty at maximum force.

**THE HIGHEST FORCE TO MOTOR WEIGHT RATION** in the industry.

**LOW NOISE LEVEL.** All motors average 55 dB(A) as measured five feet from the motor.

**DUST TIGHT CONSTRUCTION AND SPLASHPROOF DESIGN** make these motors suitable for dusty, dirty environments, as well as outdoors in rain and snow.

**TERMINAL JUNCTION BOX AND CABLE** are assembled with compression type Belleville locking washers to prevent loosening by vibrator.

• 53 different models
• Frequency ranges: 3600, 1800, 1200 & 900 rpm
• Horsepower ranges: 1/50 to 17-1/2 hp
• Force output: 30 lbs. to 40,000 lbs.
• Explosion-proof options available

LOCATING VIBRATOR MOTORS ON HOPPERS & BINS

The majority of applications require only one motor vibrator. Figure 1 illustrates the most commonly recommended mounting for a single unit on a bin or hopper, attaching the motor 1/3 up the sloped wall section. Applications requiring more than one vibrator generally involve larger hoppers or more difficult flowing materials. Figures 2 and 3 illustrate the mounting of 2 and 3 vibrators, respectively. More than 3 vibrators are rarely used on a particular hopper or bin.

CSA and/or CE models available upon request.

UNPARALLELED DESIGN FEATURES

**LOCATING VIBRATOR MOTORS ON HOPPERS & BINS**

The rotary electric vibrators feature a simple mechanism wherein vibrating force is created by rotating unbalanced weights attached to both ends of an induction motor shaft.

**LOW NOISE LEVEL.** All motors average 55 dB(A) as measured five feet from the motor.

**DUST TIGHT CONSTRUCTION AND SPLASHPROOF DESIGN** make these motors suitable for dusty, dirty environments, as well as outdoors in rain and snow.

**TERMINAL JUNCTION BOX AND CABLE** are assembled with compression type Belleville locking washers to prevent loosening by vibrator.

• Models SEE-0.5-2 through SEE-3.5-2 are factory preset at 100% of maximum force. They are totally adjustable by a single setting change on the eccentric weights. Force output for the SEE-0.1-2 is not adjustable.

**Capacitor and overload protection for the SEE-0.5-2 through SEE-3.5-2 are provided in a NEMA 12 enclosure, offered for each unit. Model SEE-0.1-2 has the capacitor built into the motor itself.**

3600 RPM Single Phase 115/1/60

**OPERATES OFF STANDARD 115/1/60 POWER**

**CONTINUOUS DUTY RATED**

**TOTA LLY ENCLOSED, DUST TIGHT HOUSING**

**CAPACITOR STARTER SUPPLIED WITH EACH UNIT**

**QUIET OPERATING, LESS THAN 60 dba**

**0-100% FORCE ADJUSTMENT**

**3600 RPM SINGLE PHASE 115/1/60**

**MODEL DIRECT REPLACEMENT HP MAX FORCE (lbs.) DRIVING RATING A B C D E F G H J K L M**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HP</th>
<th>MAX FORCE (lbs.)</th>
<th>DRIVING RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEE-0.1-2</td>
<td>1/50</td>
<td>30</td>
<td>—</td>
</tr>
<tr>
<td>SEE-0.5-2</td>
<td>1/25</td>
<td>110</td>
<td>B</td>
</tr>
<tr>
<td>SEE-1-2</td>
<td>1/12</td>
<td>220</td>
<td>B</td>
</tr>
<tr>
<td>SEE-2.2</td>
<td>1/6</td>
<td>440</td>
<td>—</td>
</tr>
<tr>
<td>SEE-3.5-2</td>
<td>1/6</td>
<td>770</td>
<td>—</td>
</tr>
</tbody>
</table>

**DIMENSIONS (inches) FULL LOAD AMPS AT 115v. WT. (lbs.) UNBALANCE (inch-lbs.)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIMENSIONS (inches)</th>
<th>FULL LOAD AMPS AT 115v.</th>
<th>WT. (lbs.)</th>
<th>UNBALANCE (inch-lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEE-0.1-2</td>
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<td>30</td>
<td>—</td>
<td>0.100</td>
</tr>
<tr>
<td>SEE-0.5-2</td>
<td>1/25</td>
<td>110</td>
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</tr>
<tr>
<td>SEE-3.5-2</td>
<td>1/6</td>
<td>770</td>
<td>—</td>
<td>2.0</td>
</tr>
</tbody>
</table>
**3600 RPM 2-Pole, 230/460 Volt, 3-Phase, 60 Cycle**

- **3600 RPM motors are dual voltage, either 230 volt or 460 volt 3-phase. Specify voltage when ordering. 575 volt available on special order.**
- **All 3600 RPM motors are rated for continuous duty at the maximum force setting.**
- **50 cycle motors are available for all 3600 RPM motors. Consult factory for pricing and availability.**
- **Factory preset at 100% of maximum force. All units are totally adjustable by a simple setting change on the eccentric weights.**
- **Available in 460 volt only.**

**1800 RPM 4-Pole, 230/460 Volt, 3-Phase, 60 Cycle**

- **1800 RPM motors are dual voltage, either 230 volt or 460 volt 3-phase. Specify voltage when ordering. 575 volt available on special order.**
- **All 1800 RPM motors are rated for continuous duty at the maximum force setting.**
- **50 cycle motors are available for all 1800 RPM motors. Consult factory for pricing and availability.**
- **Factory preset at 100% of maximum force. All units are totally adjustable by a simple setting change on the eccentric weights.**
**For Larger Feeder, Tables and Screeners**  
**High Amplitude, Low Frequency Design**  
**1/4 HP to 17-1/2 HP Size Range**  
**0-100% Force Adjustment**  
**Continuous Duty Rated at Maximum Force**

- 1200 RPM motors are dual voltage, either 230 volt or 460 volt 3-phase. Specify voltage when ordering. 575 volt available on special order.  
- All 1200 RPM motors are rated for continuous duty at the maximum force setting.

- 50 cycle motors are available for all 1200 RPM motors. Consult factory for pricing and availability.  
- Factory preset at 100% of maximum force. All units are totally adjustable by a simple setting change on the eccentric weights.

- Ideal Shaker Vibrator for Foundries  
- High Capacity Feeder Drive  
- Suitable Drive for Large Screeners  
- Replace Old Belt Driven Type Shaker Drives  
- Quiet Operating, Dust Tight, Continuous Duty Rated

**1200 RPM 6-Pole, 230/460 Volt, 3-Phase, 60 Cycle**

- Model: KEE-18-6  
- BE-3960-6  
- 1-1/2 HP  
- 3,960 A  
- 4.8, 2.7  
- 185, 103

**900 RPM 8-Pole, 230/460 Volt, 3-Phase, 60 Cycle**

- Model: KEE-185-8  
- BE-40700-8  
- 15 HP  
- 40,700 C  
- 4-15/16, 1-1/2, 11-7/16, 1-25/32, 4-15/16  
- 1800, 1882.0

**Technical Specifications**

- **Model:** KEE-18-6  
- **BE-3960-6**  
- **1-1/2 HP**  
- **3,960 A**  
- **4.8, 2.7**  
- **185, 103**

- **Model:** KEE-185-8  
- **BE-40700-8**  
- **15 HP**  
- **40,700 C**  
- **22-1/16, 22-7/16, 39-3/4, 5-33/64, 20-15/32, 20-3/32, 24-1/32**  
- **4-15/16, 1-1/2, 11-7/16, 1-25/32, 4-15/16**  
- **1800, 1882.0**

**Drawings**

- **Drawing A**  
- **Drawing B**  
- **Drawing C**

**Dimensions (inches)**

- **FULL LOAD**
- **AMPS AT**
- **UNBALANCE**
- **W T.**
- **MAX**
- **Dwg.**
- **Ref.**
- **MAX DIRECT REPLACEMENT H.P.**

**Technical Details**

- **1200 RPM motors are dual voltage, either 230 volt or 460 volt 3-phase. Specify voltage when ordering. 575 volt available on special order.**
- **All 1200 RPM motors are rated for continuous duty at the maximum force setting.**

- **50 cycle motors are available for all 1200 RPM motors. Consult factory for pricing and availability. Factory preset at 100% of maximum force. All units are totally adjustable by a simple setting change on the eccentric weights.**
- **All 900 RPM motors are dual voltage, either 230 volt or 460 volt 3-phase. Specify voltage when ordering. 575 volt available on special order.**
- **All 900 RPM motors are rated for continuous duty at the maximum force setting.**

**Ideal Uses**

- **For Large Feeders, Tables and Screeners**  
- **High Amplitude, Low Frequency Design**  
- **1/4 HP to 17-1/2 HP Size Range**  
- **0-100% Force Adjustment**  
- **Continuous Duty Rated at Maximum Force**

**Additional Features**

- **Quiet Operating, Dust Tight, Continuous Duty Rated**  
- **Ideal Shaker Vibrator for Foundries**  
- **High Capacity Feeder Drive**  
- **Suitable Drive for Large Screeners**  
- **Replace Old Belt Driven Type Shaker Drives**

**Specifications Table**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DIRECT REPLACEMENT</th>
<th>MAX DIRECT REPLACEMENT H.P.</th>
<th>MAX Amps</th>
<th>DRWG.</th>
<th>REF.</th>
<th>DIMENSIONS (inches)</th>
<th>FULL LOAD</th>
<th>AMPS AT 230v.</th>
<th>AMPS AT 460v.</th>
<th>UNBALANCE (inch-lbs.)</th>
<th>W T.</th>
<th>MAX DIRECT REPLACEMENT H.P.</th>
</tr>
</thead>
</table>
AMPLITUDE & FORCE REQUIREMENTS

Amplitude (inches)

Force (pounds)

Frequency (RPM/motor)

Load (pounds)

Equal to structure weight, plus motor weight, plus material or product weight.

AMPLITUDE = 70,500 x FORCE

LOAD x (FREQUENCY)^2

FORCE REQUIRED = AMPLITUDE x LOAD x (FREQUENCY)^2

70,500

NOTE: The actual frequencies, vibrator weights, and force figures needed for the above calculations can be obtained from data charts in this brochure.

ADJUSTMENT OF FORCE OUTPUT

These motor vibrators are easily adjusted by setting the dot on the eccentric weight to the proper (% of maximum force) output. The photo at right shows the operator setting the weights at just under 90% of maximum force.

IMPORTANT: Both ends of the motor must be adjusted to the same setting.

BPS custom engineers and fabricates the following products and more in its 30,000 sq. ft. facility in Brunswick, OH.

- VIBRATORY FEEDERS AND CONVEYORS
- VIBRATORY SCREENERS
- VIBRATORY TABLES
- BULK BAG LOADERS
- BULK BAG UNLOADERS
- CUSTOM ENGINEERED SYSTEMS