HIGH PERFORMANCE PERCUSSION RAMMERS

Rammer Specifications

MBW urges interested parties to see “Beware of Compactor Specifications” at WWW.MBW.COM

- Published lift capacity reflects ideal conditions (clean sand, optimum moisture). Good compaction practice restricts lift depth to a maximum of 12 inches for granular soils, 6 to 9 inches for cohesive soils.
- Published travel speeds generally indicate operation under ideal conditions.
- Area of compaction calculations factor in lift and travel expectations that may not be realistic for all conditions of compaction.
- There is no universally accepted formula or method for determining rammer “compaction force”. Manufacturers employ their own formulas/methods to develop “compaction force” specifications thereby rendering comparison between rammers an exercise in futility.
The R422 & R442 RAMMERS are ideally suited for the compaction of granular, mixed and cohesive soils in confined areas. The R422 & R442 offer highly productive percussion rammers at 145 up to 154 lbs. The contoured fuel tank provides the largest fuel capacity in its class and baffles engine noise. Power is supplied by Honda engines. Model R442 delivers approximately 25% more compaction force and is recommended for heavy clay soils.

Models R422 and R442 with the Honda GX100 engine are recommended for altitude above 4000 ft.

- Elevated bellows placement for trench applications
- Patented UHMW polyethylene slide bearings provide minimal internal wear
- 11” ductile cast iron tamping shoe
- 4” and 6” trench shoes available for the R422

Available with choice of two engines

- Honda GX100
- Honda GX100 w/oversized air filter
- Honda GXR120

US & International Patents


The R482 RAMMER is equipped with integral tachometers and hour meters that indicate when maximum operational performance is being reached and when maintenance intervals are needed. The result is higher productivity and increased service life. Weighs between 158–165 lbs. Model R482 with the Honda GXR120 engine is recommended for altitude above 4000 ft.

Available with a choice of two engines which provide sure starts and long-term low maintenance.

- Honda GX100
- Honda GXR120

US & International Patents


<table>
<thead>
<tr>
<th>MODEL</th>
<th>R422</th>
<th>R442</th>
<th>R482 - 11” SHOE</th>
<th>R482 - 13” SHOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoe Size</td>
<td>11 x 13 in (28 x 33 cm)</td>
<td>11 x 13 in (28 x 33 cm)</td>
<td>13 x 15 in (33 x 38 cm)</td>
<td></td>
</tr>
<tr>
<td>Engine Options &amp; Operating Weight</td>
<td>Honda GX100 145 lb (66 kg)</td>
<td>Honda GX100 150 lb (68 kg)</td>
<td>Honda GX100 158 lb (72 kg)</td>
<td>Honda GX100 165 lb (75 kg)</td>
</tr>
<tr>
<td></td>
<td>Honda GX100 with Oversized Air Filter 149 lb (69 kg)</td>
<td>Honda GX100 with Oversized Air Filter 154 lb (70 kg)</td>
<td>Honda GX100 with Oversized Air Filter 158 lb (72 kg)</td>
<td>Honda GX100 with Oversized Air Filter 165 lb (75 kg)</td>
</tr>
<tr>
<td></td>
<td>Honda GXR120 145 lb (66 kg)</td>
<td>Honda GXR120 150 lb (68 kg)</td>
<td>Honda GXR120 158 lb (72 kg)</td>
<td>Honda GXR120 165 lb (75 kg)</td>
</tr>
<tr>
<td>Percussion Rate</td>
<td>Up to 720 blows/min</td>
<td>Up to 650 blows/min</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compaction Area</td>
<td>3025 ft²/hr (281 m²/hr)</td>
<td>3025 ft²/hr (281 m²/hr)</td>
<td>3300 ft²/hr (307 m²/hr)</td>
<td>3900 ft²/hr (362 m²/hr)</td>
</tr>
<tr>
<td>Travel Speed</td>
<td>Up to 55 ft/min (16 m/min)</td>
<td>Up to 60 ft/min (18.3 m/min)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compaction Depth*</td>
<td>Up to 18 in (45 cm)</td>
<td>Up to 24 in (61 cm)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Clean sand, optimum moisture. MBW recommends that lifts not exceed 12” of granular soil, 9” of cohesive soil.

Fuel capacity of 1.1 gal (4.2 L); Engine 3600 rpm


- POLYETHYLENE
dual layer EPA crosslinked fuel tank to resist punctures and abrasions and UV resistant has largest capacity in the industry

- NON-METALLIC SPRING SEPARATOR
to further reduce friction

- 4 PLY VULCANIZED RUBBER BELLows
reinforced with stranded steel cable

- COMPRESSION SPRINGS
manufactured of highest quality, stress relieved alloy steel. Springs do not bottom out or require rubber stoppers like competitive models

- PRECISION BALANCED HANDLE
with contoured fuel tank

- IMPACT RESISTANT ENGINE GUARD
protects against damage

- HIGH DENSITY NON-METALLIC SLIDE BEARINGS
reduce internal friction to the lowest levels in the industry

- DUCTILE CAST IRON
MBW shoes do not absorb impact like competitive models but transfer all force to soil.
The AIRAMMER® is a pneumatically powered rammer. It eliminates a long list of engine related problems. There are no fuel or fuel mixing issues, no carburetor, no spark plug, no rewind starter, no flooding problems, no air or fuel filters that can be plugged and no rpm issues, all of which affect performance.

The Airammer also offers the following advantages:

- No need to handle flammable gas or oil
- Lower maintenance cost $$
- Motor is closer to the gearbox for better balance
- Can be transported or stored in any position
- No exhaust fumes, safe for indoor use
- Easier to run and maneuver

MBW continuously works to lower maintenance and extend life expectations of its rammers. MBW rammers feature the industry’s only percussion system completely free of high friction/heat/wear metal-on-metal reciprocating wear surfaces. The patented design features c-shaped, non metallic, slide bearings between spring separator and spring box, ram shaft and spring box, and spring box and guide tube. Wear characteristics of the MBW bearings are several times better than traditional steel-on-cast iron designs. Lower operating friction/heat provide positive implications for engine, lubricant and bellows life. Unlike stiff plastic bellows, the MBW vulcanized rubber bellows with stranded steel enforcement reduce jobsite punctures and is far more resilient to UV degradation.

In the event percussion system lubricant is lost, MBW percussion systems are designed to fail a single slide bearing, locking up the system and preventing damage to other bearing surfaces, as well as bearings and seals in the rammer’s gearbox. Because MBW percussion systems generate less internal friction, rammers operate more efficiently, consume less fuel, and deliver more compaction force for the purpose intended. When replacement is eventually called for, MBW slide bearings are replaced at low cost, returning percussion systems to original specification.

Endurance testing of the new design exceeded even MBW’s expectations. As a result, MBW gas powered rammers now provide a 5 year warranty on percussion system slide bearings and bellows.

**5 YEARS ON BELLOWS & PERCUSSION SYSTEM BEARINGS**

<table>
<thead>
<tr>
<th></th>
<th>AR56 - 11&quot; SHOE</th>
<th>AR57 - 13&quot; SHOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoe Size</td>
<td>Iron 11 x 13 in (28 x 33 cm)</td>
<td>Alum 13 x 15 in (33 x 38 cm)</td>
</tr>
<tr>
<td>Operating Weight</td>
<td>124 lb (56 kg)</td>
<td>126 lb (57 kg)</td>
</tr>
<tr>
<td>Percussion Rate</td>
<td>650 blows/min</td>
<td>650 blows/min</td>
</tr>
<tr>
<td>Compaction Area</td>
<td>3300 ft³/hr (307 m³/hr)</td>
<td>3900 ft³/hr (362 m³/hr)</td>
</tr>
<tr>
<td>Travel Speed</td>
<td>Up to 60 ft/min (18.3 m/min)</td>
<td>Up to 60 ft/min (18.3 m/min)</td>
</tr>
<tr>
<td>Compaction Depth*</td>
<td>Up to 24 in (61 cm)</td>
<td>Up to 24 in (61 cm)</td>
</tr>
<tr>
<td>Air Required</td>
<td>75 cfm 100 psi</td>
<td>75 cfm 100 psi</td>
</tr>
<tr>
<td>RPM</td>
<td>4500</td>
<td>4500</td>
</tr>
</tbody>
</table>

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() Metric Measurements. Specifications subject to change without notice.

AIRAMMER

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