World’s First and Only
VIBRATORY PNEUMATIC TIRED ROLLER

A 9 ton vibratory pneumatic tired roller
equal or exceeding the compaction results
of a 25 ton tired roller

Versatility with compact size and high
compaction performance

Improves Compaction Quality and Efficiency

- Dynamic kneading action produces more uniform
  compaction from top to bottom of the pavement layer
- Versatility on both large and small projects for tight
  and dense longitudinal joints, hot mix asphalt (HMA),
  aggregate base, roller compacted concrete and warm-
  and cold-mixes, etc.
- Maneuverable in tight spaces on city streets, parking
  lots and cul-de-sacs by center-pin articulated steering
- All wheel drive system to minimize shoving of HMA mix

High Safety Standards

- 1m x 1m visibility
- Emergency brake pedal is standard

Cost Saving

- Savings in trucking and fuel costs with lighter weight
  and efficient compaction

If you need any technical or service parts support on our products,
please contact this web page:

www.sakainet.co.jp/english/
Proven compaction technology around the world

Major Airports
San Francisco International, CA, USA
Atlanta International, GA, USA

Soil subbase, Australia

Queensland, Australia
Brakedown application, USA
Intermediate application, Japan
The World's First and Only
Vibratory pneumatic tire roller
With variable amplitude settings

- Four (4) amplitude settings to achieve the required density
- High productivity on both large and small projects with the ability to maneuver in tight spaces on city streets, parking lots and cul–de–sacs.
- Density results achieved by the 9 ton GW750 are equal or higher than those of a 25 ton static tire roller. *1
  *1 The compaction performance may vary depending on working conditions.

<table>
<thead>
<tr>
<th>Amplitude setting</th>
<th>Amplitude</th>
<th>Centrifugal Force</th>
<th>Equivalent compaction efforts to a static pneumatic tire roller (ton)</th>
<th>Applications and layer thickness (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static</td>
<td>0.0</td>
<td>0</td>
<td>≥ 9</td>
<td>Overlays and thin HMA layers, less than 5cm</td>
</tr>
<tr>
<td>1</td>
<td>0.1</td>
<td>8</td>
<td>≥ 10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.3</td>
<td>25</td>
<td>≥ 15</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.5</td>
<td>42</td>
<td>≥ 20</td>
<td>Binder and base course layers, thicker than 5cm</td>
</tr>
<tr>
<td>4</td>
<td>0.7</td>
<td>58</td>
<td>≥ 25</td>
<td></td>
</tr>
</tbody>
</table>

*2 The amplitude selected and number of roller passes should be reconfirmed by test section.
**DYNAMIC KNEADING ACTION** improves pavement quality

**Dynamic Kneading Action** compacts pavement materials more uniformly by combining the kneading action of pneumatic tires with the vibration effect.

- Creates better bonding between new overlay pavement and the old milled surface by eliminating the **bridging effect** that normally occurs with steel drum rollers, see Fig. 1
- Provide sufficient bonding between aggregates and asphalt emulsion in chip seal pavement, see Fig. 2
- Produces tight longitudinal joints, see Fig. 3
- Removes hairline cracks from HMA pavement, See Fig. 4
- Gives uniform compaction throughout thick HMA pavement layer, see Fig. 5
- Seals the surface of Roller Compacted Concrete Pavement (RCCP), see Fig. 6

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**Fig 1.** Schematic diagram showing bonding effect between the new overlay pavement and the old milled surface

**Fig 2.** Chip seal pavement finished by GW750

**Fig 3.** Tighter longitudinal joint along existing pavement or forms with a steel drum roller vs. the GW750

**Fig 4.** Remove hairline cracks from HMA pavement

**Fig 5.** Uniform compaction throughout thick lift (27 cm with 3.8 cm aggregate size) HMA pavement layer by two different rollers

**Fig 6.** Sealing the surface of Roller Compacted Concrete Pavement (RCCP)

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**GW750**

**After compaction**

**Core for a steel drum roller**

**Core for the GW750**

**Hairline cracks caused by a steel drum roller**

**Surface smoothed out by the GW750**
Further improvements on compaction quality

- Center-pin articulated steering system gives perfect tire overlap and finishes HMA pavement smoothly without shoving the HMA mix
- Overlap between tires in front and rear axles ranges up to 145 mm
- All Wheel Drive minimizes the shoving of both tender and stiff HMA mixes regardless of which direction the machine is rolling.
- Super-flat tires achieve a smoother finish on HMA pavement surfaces compared to conventional rounded pneumatic tires.

Saving in trucking and fuel costs

- Easier and faster to move to and from jobs due to lighter weight only 9 tons
- Lower weight means lower fuel consumption when hauling and when operating the roller

Environment friendly

- Approximately 40% reduction of the CO₂ gas*³ by using the GW750 compared with a 25 ton static tire roller

*³ The amount of CO₂ gas was estimated based on working hours required for compacting 2000 m² area under fuel consumption by the engines mounted on each model.
High safety standard

- **1 m x 1 m visibility**
  - The operator is able to have excellent all around visibility from the operator seat. Blind spot is very small.

- **Tire edge visibility with two seats side by side**
  - Good visibility along curbs and in tight spaces

- **Brake system**
  - Emergency pedal brake
  - Hydrostatic primary brake
  - SAHR*4 secondary brake for parking and emergency auto brake
  
  *4 SAHR: Spring-Applied, Hydraulically Released brake

- **Interlock of engine start with a Forward-Reverse (F-R) lever**
  - Engine can be cranked only when F-R lever is placed in the neutral position
  - Vibration switch mounted on the grip of F-R lever

- **ROPS CANOPY (Optional)**
Environment friendly

- Rustproof sprinkler and release agent spray systems
  
  - Water sprinkler system
    - Plastic water tank (300 L x 2)
    - Visible water gauge from operator seat
    - Inline filter with a handle for cleaning filter element
    - Stainless spray bars
    - Brass quick-mount nozzles with filter
    - Perfect winterization
  
  - Release agent spray system
    - Plastic tank (Approx. 20 L)
    - Suction filter in the plastic tank
    - Brass spray bars
    - Brass quick-mount nozzles with filter
    - Spray adjusting valves
    - Perfect winterization

- Easy access to maintenance points
  - Fully opened engine hood
  - Wide doors accessible from the ground

- Engine diagnostic indicators (Only GW750-2)
  
  - Engine check
    - For electric control of engine
  
  - Boost Temp.
    - For turbo and fuel temperature
  
  - Overheat
    - For coolant temperature

- Quick change Coco-mat (Optional)
  
  - Flexible rubber mounted Coco-mat for quick change
  - Coco mats fit tight to the tires
## TYPE

**MODEL**

<table>
<thead>
<tr>
<th>CHASSIS MODEL</th>
<th>GW750</th>
<th>GW750-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VGW1</td>
<td>VGW2</td>
</tr>
</tbody>
</table>

### WEIGHTS

- **Max. operating weight with AWNING**
  - kg (lbs): 9,040 (19,930)
- **Max. operating weight with ROPS CANOPY**
  - kg (lbs): 9,280 (20,460)
- **Operating weight with AWNING**
  - kg (lbs): 8,700 (19,185)
- **Shipping weight with AWNING**
  - kg (lbs): 8,300 (18,300)
- **Load on front axle - operating weight with AWNING**
  - kg (lbs): 3,710 (8,180)
- **Load on rear axle - operating weight with AWNING**
  - kg (lbs): 4,990 (11,005)

### PERFORMANCE

- **Centrifugal force (Front 1 / 2 / 3 / 4)**
  - kN (lbs): 6 / 19 / 32 / 45 (1,345 / 4,270 / 7,190 / 10,115)
- **Centrifugal force (Rear 1 / 2 / 3 / 4)**
  - kN (lbs): 8 / 25 / 42 / 58 (1,750 / 5,505 / 9,415 / 13,125)
- **Frequency**
  - Hz (rpm): 40 (2,400)
- **Amplitude (1 / 2 / 3 / 4)**
  - mm (in): 0.10 / 0.31 / 0.53 / 0.74 (0.004 / 0.012 / 0.021 / 0.029)
- **Number of speed shifts**: 3
- **Speed range (1 / 2 / 3)**
  - km / h (mph): 5 / 7 / 12 (2.8 / 4.3 / 7.5)
- **Gradeability % (%)**: 38 (20)
- **Turning radius compacted surface (inside / outside)**
  - m (in): 3.8 / 5.4 (150 / 213)

### DIMENSIONS

- **Overall length L**: 4,540 (179)
- **Overall width W**: 2,200 (87)
- **Overall height at the top of steering wheel**: 2,185 (86)
- **Overall height (with AWNING) H**: 2,975 (117)
- **Overall height (with ROPS) H1**: 3,035 (119)
- **Wheelbase L1**: 3,000 (118)
- **Compaction width W’**: 1,950 (77)
- **Tire size x Number of tires (Front / Rear)**: 14 / 70 - 20 - 12 PR (3/4)
- **Inflation (each wheels)**: 441 (63.9)
- **Ground clearance**: 265 (10)
- **Curb clearance**: 245 (10)
- **Side clearance**: 125 (5)

### ENGINE

- **Make & Model**
  - ISUZU “DD-4BG1T” Tier2 : equivalent ISUZU “4JJ1XDIA” Tier3 : equivalent
- **Type**
  - Diesel, water-cooled, 4-cylinder, 4-cylinder inline, with turbo charger
- **Displacement L (cu.in)**: 4.329 (264.2)
- **Rated output kW (HP)/min**
  - 78.8 (106) / 2,300
  - 92.0 (123) / 2,200
- **Electric system battery**
  - V (Ah x Qty)
  - 24 (12 / 80Ah x 2)
- **Electric system alternator V/A**
  - 24 / 50

### DRIVE SYSTEM

- **Power transmission type**
  - Hydrostatic
- **Drive wheel**
  - All wheel
- **VIBRATION SYSTEM**
  - **Number of amplitude**: 4
- **Vibrator type**
  - Variable eccentric shaft
- **BRAKE SYSTEM**
  - **Service brake**
  - **Secondary brake (Emergency brake)**
  - **Parking brake**
  - **SAHR / Panel button**
  - Hydraulic
  - Dynamic braking through hydrostatic drive system / FNR lever
  - Hydrostatic + Spring applied hydraulically released type (SAHR) / Brake pedal

### FLUID CAPACITY

- **Fuel tank L (gal)**: 130 (34.3)
- **Hydraulic oil tank L (gal)**: 65 (17.2)
- **Water Sprinkler tank L (gal)**: 280 (73.97) x 2

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* Using low quality fuel may cause engine failure.

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*Max operating weight : 100 % fuel, 100 % water, operator 75 kg
Operating weight : 50 % fuel, 50 % water, operator 75 kg
Specifications are subject change without notice.*