

## Key Features

### Application/Versatility

- Applications include road, railway, airfield and industry yard compaction
- Optional diamond shape pad-foot roller for compacting clay soils
- Optional square shape pad-foot roller for compacting sandy materials

### High efficiency

- 50mm drum, compaction performance is 10%~15% better than competitors
- Isolated modular cooling system, works in ambient temperature of 43 °C

### Reliability

- Vibration system utilizes an eccentric vibrate pod design, extends life up to 50%
- Closed center hydraulic system, world famous piston pump and motor
- Electronically controlled transmission, easy and comfortable to operate

### Operation

- Digital frequency meter, monitors compaction frequency
- Three level alarm system and Engine speed gauge monitor machine performance

## Tiltable Cab

SEM offers a tiltable cabin which provides more convenient maintenance of the pump, transmission, hose and electronic components

- Hydraulic tiltable cab is optional



Hydraulic tilting device as option

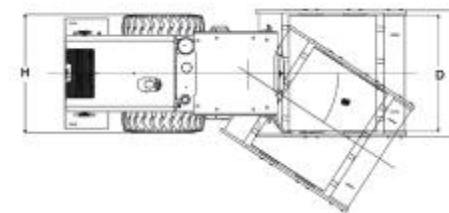
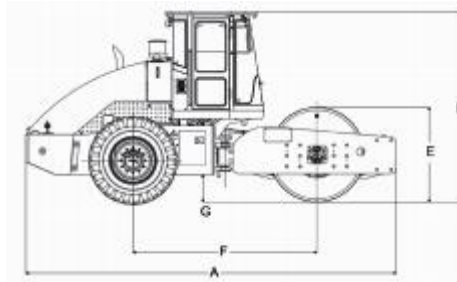
## Optional Accessories

| Configuration (O=Optional)                        | SEM518 | SEM520 | SEM522 |
|---|--------|--------|--------|
| 20.5-25 Diamond Tread Tires                       | O      | O      | O      |
| 20.5-25 Agriculture Tread Tires                   | O      | O      | O      |
| Cold Start (intake air heating)                   | O      | O      | O      |
| Compaction Meter                                  | O      | O      | O      |
| A/C (Cooling & Heating)                           | O      | O      | O      |
| High Ambient Cooling System                       | O      | O      | O      |
| Cab Hydraulic Tilting Device                      | O      | O      | O      |
| Sunshade Curtain                                  | O      | O      | O      |
| Deluxe Suspension Swiveling Seat with Safety Belt | O      | O      | O      |
| Heater Only with Defrost                          | O      | O      | O      |
| Radio/Rotating Beacon/Rear Wiper & Washer         | O      | O      | O      |
| Diamond Shape Padfoot with Steel Scrapers         | O      | O      | O      |
| Square Shape Padfoot with Steel Scrapers          | O      | O      | O      |

## Specifications

| Model                          | SEM518    | SEM520    | SEM522    |
|--------------------------------|-----------|-----------|-----------|
| Operating Weight               | 18000kg   | 20000kg   | 22000kg   |
| <b>Compaction</b>              |           |           |           |
| Vibration Frequency (High/Low) | 30/28Hz   | 30/28Hz   | 30/28Hz   |
| Amplitude (High/Low)           | 2/1mm     | 2/1mm     | 2/1mm     |
| Excitation Force (High/Low)    | 327/188KN | 360/208KN | 374/215KN |
| Static Pressure                | 415N/cm   | 461N/cm   | 507N/cm   |
| <b>Engine</b>                  |           |           |           |
| Rated Power                    | 129kw     | 129kw     | 140kw     |
| Speed                          | 2000r/min | 2000r/min | 2000r/min |
| Fuel Tank Volume               | 262L      | 262L      | 262L      |
| Hydraulic Oil Tank Volume      | 80L       | 80L       | 80L       |
| <b>Drum</b>                    |           |           |           |
| Drum Width                     | 2130mm    | 2130mm    | 2130mm    |
| Drum Diameter                  | 1600mm    | 1600mm    | 1600mm    |
| Drum Thickness                 | 40mm      | 50mm      | 50mm      |
| <b>Tires</b>                   |           |           |           |
| Tires Type                     | 20.5-25   | 20.5-25   | 20.5-25   |
| <b>Speed</b>                   |           |           |           |
| F/R I                          | 2.98km/h  | 2.98km/h  | 2.98km/h  |
| F/R II                         | 5.88km/h  | 5.88km/h  | 5.88km/h  |
| F/R III                        | 9.60km/h  | 9.60km/h  | 9.60km/h  |
| Swing Angle                    | ±12°      | ±12°      | ±12°      |
| Steering Angle                 | ±33°      | ±33°      | ±33°      |
| Outer Turning Radius           | 6350mm    | 6350mm    | 6350mm    |
| Max. Gradeability              | 34%       | 34%       | 34%       |

## Dimensions



| Size   | A     | B     | C     | D     | E     | F     | G   | H     | β   |
|--------|-------|-------|-------|-------|-------|-------|-----|-------|-----|
| SEM518 | 6,250 | 3,200 | 2,310 | 2,130 | 1,600 | 3,100 | 460 | 2,160 | 33° |
| SEM520 | 6,250 | 3,200 | 2,310 | 2,130 | 1,600 | 3,100 | 460 | 2,160 | 33° |
| SEM522 | 6,250 | 3,200 | 2,310 | 2,130 | 1,600 | 3,100 | 460 | 2,160 | 33° |

The swing angle of the front and rear frame ±12°

# SEM518/520/522 Soil Compactor



\* Featured machines in photos may include optional equipment

## SEM518 SEM520 SEM522

- High Efficiency:** The unique vibratory pod design along with 50 mm thick drum provides superior compaction performance
- Reliability:** Vibration system utilizes eccentric vibrate pod design, extends life over 50%
- Operation:** Digital frequency meter and three level alarm system monitor machine performance



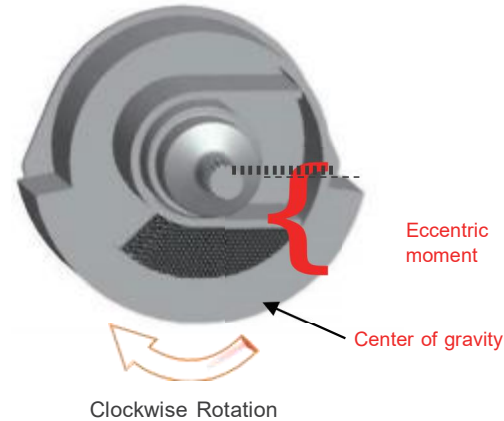
A Caterpillar Brand

## Vibe Pod Design



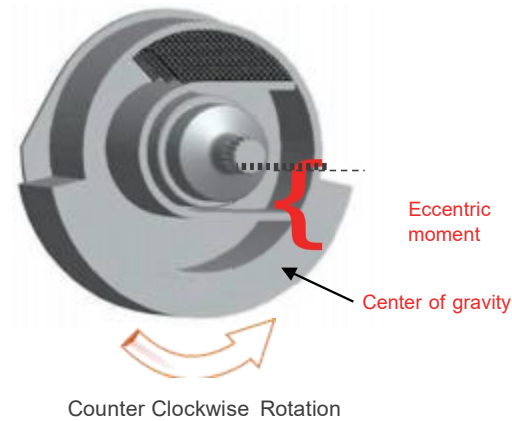
- Eccentric vibe pod design, extends system life by 50%
- Steel shot moving inside closed eccentric block, stable and reliable vibe amplitude, reduces impact to motor, prolongs maintenance period of vibratory system
- Completely sealed eccentric gear eliminates contamination, prolongs bearing life
- SEM520/522 are equipped with a 50 mm thick drum compared to competitors with a 40 mm thick drum, provides increased compaction performance versus the competition

### High Amplitude



- The position of the steel shot and the eccentric weight combine to produce the maximum centrifugal force

### Low Amplitude



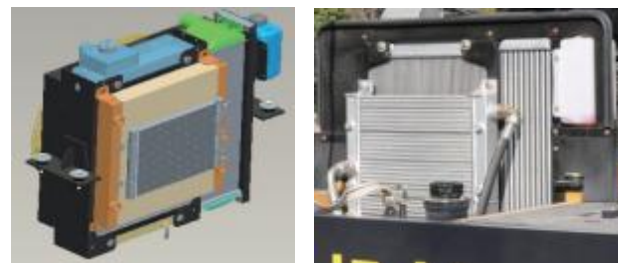
- The position of the steel shot is offset by the eccentric weight to produce a lower centrifugal force

## Cooling System

### Isolated modular cooling system

- Suction style fan pulls low temperature air through the radiator, providing superior cooling capability
- Optional high ambient cooling system allows the machine to work in ambient temperature up to 50 °C

**Shunt tank provides constant system pressure and provides easy visual check of coolant level**



## Vibratory Hydraulic System

### Closed center hydraulic system

- Improves efficiency by 20% over the open center system
- Reduces oil contamination, prolongs life of hydraulic system
- Maintains higher pressure and smaller energy loss
- Allows for simpler hose routing
- Requires smaller volume hydraulic tank, reduces maintenance cost

### World class vibratory hydraulic components

- SEM518/520 utilize Sauer piston pump and motor
- SEM522 utilize Rexroth piston pump and motor

### Vibratory hose

- Utilize Eton hoses and joints, high reliability
- Optimized hose routing, prolongs hose life



## Cat® Product Link™

Cat® Product Link™ will support your business, and accurately convey information of the equipment to relevant personnel in a timely and effective manner for your better equipment management.



## Powertrain

### Electronically controlled transmission

- Easier to shift, reduces operator fatigue and improves working efficiency
- High reliability

### Axle equipped with Proportional Torque differential (PTD)

- PTD controls torque applied to the wheels based on ground conditions, improves overall traction
- Grade ability is 34% compared to competitors, at 30%
- Optimized transmission ratio, 1<sup>st</sup> gear has higher travel speed



## Dashboard

### Vibratory Frequency Meter

- Continuously displays machine compaction frequency
- Operator may select appropriate frequency to avoid excessive compaction

### Three Level Alarm System

- Machine will diagnose system issues and notify the operator with 3 levels of warning indicator lights and audio alarms



| Display Contents             |                 |
|------------------------------|-----------------|
| Transmission Oil Temperature | Battery Voltage |
| Vibratory Frequency Meter    |                 |
| Working Hours                |                 |

