

SEM Machinery

Soil Compactor

# SEM

## 518/520/522



※ Featured machines in photos may include optional equipment



A Caterpillar Brand

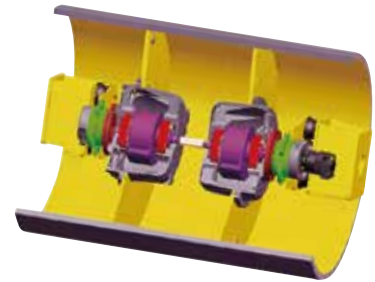
## Product Advantage

**Reliability:** Vibration system utilizes eccentric vibrate pod design, extends life over 50%

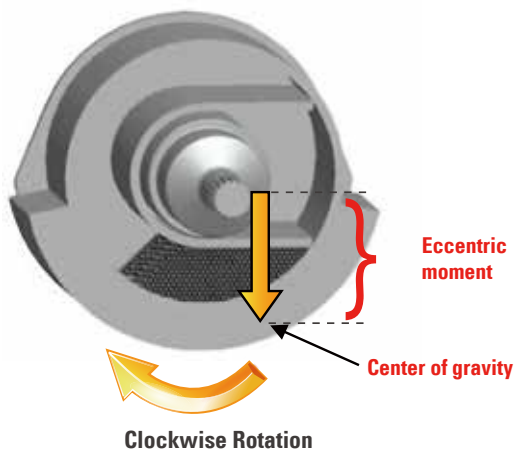
**Operation:** Digital frequency meter and three level alarm system monitor machine performance

## Vibe Pod Design

- Eccentric vibrate pod design, extends system life by 50%
- Steel shot moving inside closed eccentric block, stable and reliable vibrate amplitude, reduces impact to motor, prolongs maintenance period of vibratory system
- Completely sealed eccentric gear eliminates contamination, prolongs bearing life

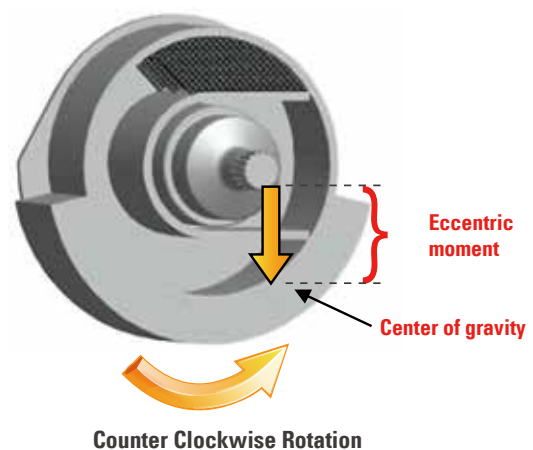


### High Amplitude



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

### Low Amplitude



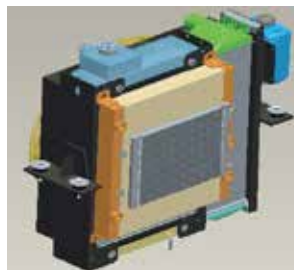
- The position of the steel shot is offset by the eccentric weight to produce a lower centrifugal force

## 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 49 °C

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



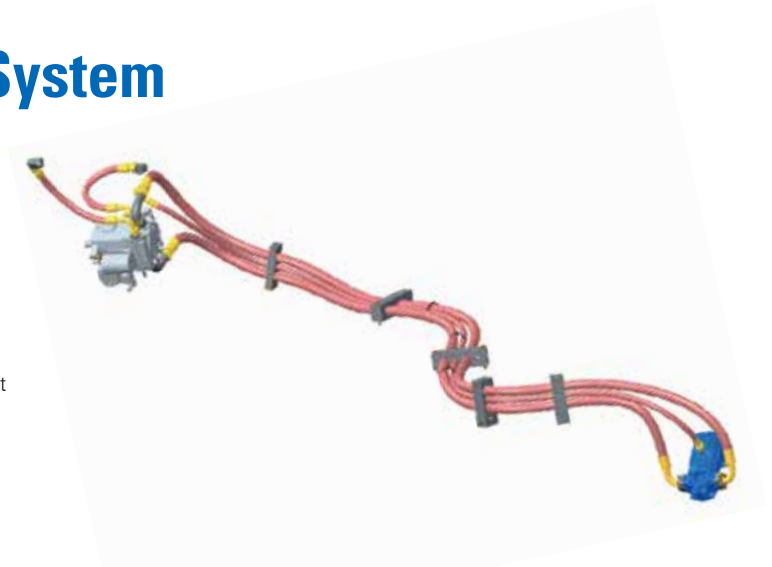
# Vibratory Hydraulic System

## 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

## Vibratory hose

- Optimized hose routing, prolongs hose life





# 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

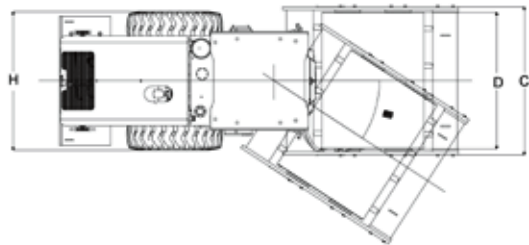
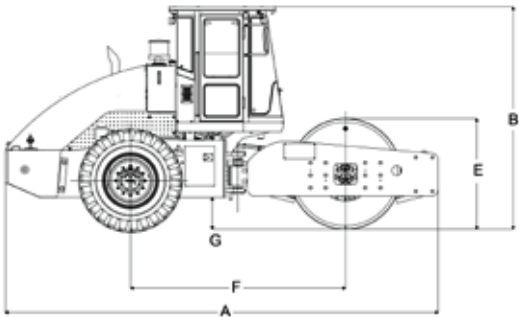
|                              |                 |
|------------------------------|-----------------|
| Transmission Oil Temperature | Battery Voltage |
| Vibratory Frequency Meter    |                 |
| Working Hours                |                 |



## Main Specifications

| Items                          | Unit  | SEM518     | SEM520     | SEM522     |
|--------------------------------|-------|------------|------------|------------|
| Operating Weight               | kg    | 18,000     | 20,000     | 22,000     |
| Compaction                     |       |            |            |            |
| Vibration Frequency (High/Low) | Hz    | 30/28      | 30/28      | 30/28      |
| Amplitude (High/Low)           | mm    | 2/1        | 2/1        | 2/1        |
| Excitation Force (High/Low)    | kN    | 327/188    | 360/208    | 374/215    |
| Static Pressure                | N/cm  | 415        | 461        | 507        |
| Engine                         |       |            |            |            |
| Model                          |       | WP6G175E20 | WP6G175E20 | WP6G190E20 |
| Rated Power                    | kW    | 129        | 129        | 140        |
| Speed                          | r/min | 2,000      | 2,000      | 2,000      |
| Fuel Tank Volume               | L     | 262        | 262        | 262        |
| Hydraulic Oil Tank Volume      | L     | 80         | 80         | 80         |
| Drum                           |       |            |            |            |
| Drum Width                     | mm    | 2,130      | 2,130      | 2,130      |
| Drum Diameter                  | mm    | 1,600      | 1,600      | 1,600      |
| Drum Thickness                 | mm    | 40         | 40         | 40         |
| Tires                          |       |            |            |            |
| Tires Type                     |       | 20.5-25    | 20.5-25    | 20.5-25    |
| Speed                          |       |            |            |            |
| F/R I                          | km/h  | 2.98       | 2.98       | 2.98       |
| F/R II                         | km/h  | 5.88       | 5.88       | 5.88       |
| F/R III                        | km/h  | 9.60       | 9.60       | 9.60       |
| Swing Angle                    | °     | ±12        | ±12        | ±12        |
| Steering Angle                 | °     | ±33        | ±33        | ±33        |
| Outer Turning Radius           | mm    | 6,350      | 6,350      | 6,350      |
| 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° |       |       |       |       |       |       |     |       |     |

## Machine Applications

### 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

## 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 (0=Optional)               | SEM518 | SEM520 | SEM522 |
|------------------------------------------|--------|--------|--------|
| High ambient cooling system              | ○      | ○      | ○      |
| Cold start preheater                     | ○      | ○      | ○      |
| Cab/ROPS Cab with HVAC                   | ○      | ○      | ○      |
| Cab/ROPS Cab with heater only            | ○      | ○      | ○      |
| Rear rain wiper(cab only)                | ○      | ○      | ○      |
| Seat plus(rotatable seat)                | ○      | ○      | ○      |
| Cab hydraulic tilt device                | ○      | ○      | ○      |
| Beacon                                   | ○      | ○      | ○      |
| Radio                                    | ○      | ○      | ○      |
| Frontal sun shade                        | ○      | ○      | ○      |
| Product link                             | ○      | ○      | ○      |
| Compaction meter                         | ○      | ○      | ○      |
| 20.5-25 Diamond tire                     | ○      | ○      | ○      |
| 20.5-25 agriculture tire                 | ○      | ○      | ○      |
| Diamond shape padfoot with steel scraper | ○      | ○      | ○      |
| Square shape padfoot with steel scraper  | ○      | ○      | ○      |