

## **SV510-III SERIES** **Vibratory Soil Compactors**

# **SAKAI**



**New Traction Control System Promotes  
Industry's Best Climbing Ability**

**Airport and Highway Subbase Compaction**

**Dams and High Volume Site Prep Jobs**

**Highest Amplitude In Its Class**

**Dual Amplitude - Dual Frequency**

**High Centrifugal Force Outputs**

**Most Advanced Shock Isolation System**

**Unique, Heavy-Duty Hitch Design**

**Superior Steering Articulation/Oscillation**

**The Sakai SV510-III Series** are designed for high yardage compaction jobs on a wide range of soil types and rockfill – highway and airport subbases, embankments, dams, reservoirs, and large commercial tracts. Tight curb and side frame clearances on both sides of the machine permit operation close to obstructions and foundations – eliminating the need for additional equipment and hand work. Sakai offers the SV510-III Series in four different models to meet any soil condition.



SV510D-III



SV510T-III

**SV510D-III** – Provides a smooth drum with drum and axle drive for use on sand, gravel, rockfill and semi-cohesive soils.

**SV510T-III** – Provides a padfoot drum with drum and axle drive for use on clays, silts and cohesive soils.



SV510TB-III



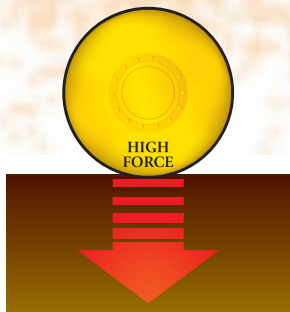
SV510TF-III

**SV510TB-III** – Adds a strike-off blade to the padfoot drum model for backfilling and leveling applications.

**SV510TF-III** – Provides a bolt-on smooth drum shell that mounts over the padfoot drum for quick drum switches in locations where soil conditions vary.

## Powerful Performance

- **High Compaction Force** – The SV510-III Series are designed to rapidly meet high density requirements on the toughest job-sites. These machines offer the highest nominal amplitude vs. the competition and up to 55,120 pounds of centrifugal force over the 84” wide drum – providing rapid compaction of many soil types, thick lifts and rockfill. The dual frequency and dual amplitude vibration system is preset for low amplitude/high vpm and high amplitude/low vpm – offering the optimum vibration setting in any application. The setting is easily selected via a switch at the operator’s station.



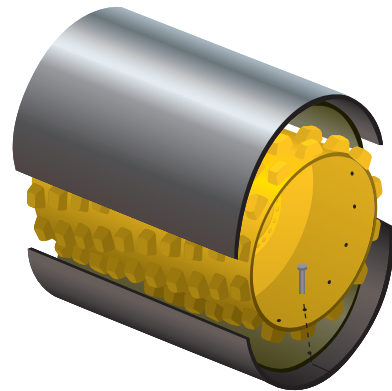
- **Long-Life Vibration System** – The Sakai SV510-III Series hydrostatic vibration system consists of few moving parts – a pump, a control valve, and a hydraulic motor – so it is designed for long life and easy maintenance. The hydraulic motor directly drives the eccentric shaft vibrator, and the vibrator bearings are automatically lubricated by an oil bath even while the roller is on a steep incline.

- **New Traction Control System** – The SV510-III Series rollers feature a new and extremely efficient traction control system that enables these machines to get up and down the steepest of trench slopes while working in either direction. Its improved climbing ability also conquers steep embankments and other elevations quickly and easily.

A newly designed single pump system includes a high torque planetary gearbox and variable displacement motors at both drum and wheels for optimum tractive effort. The new configuration is extremely efficient, requiring lower hydraulic pressures

and utilizing less engine horsepower, thus promoting fuel economy while achieving best-in-the-trenches climbing ability. A two-speed hydrostatic transmission provides variable speed ranges at a single lever – permitting the ideal speed selection for working applications or site-to-site transit. The drum drive feature also serves to pull material beneath the drum – eliminating bow wave build up.

- **Smooth/Padfoot Combination Drum** – The SV510TF-III offers the Sakai quick change, dual-purpose drum. A smooth drum shell is mounted over the padfoot drum – adding only 2” to the drum diameter. Competitors’ “convertible” drums add a 4” to 6” padfoot shell to a smooth drum – dramatically changing the geometry between the vibrating drum and the rear wheels and causing traction problems. Better still, the Sakai conversion does not require any modification of the hydraulic system and can be done on the jobsite in less than two hours.

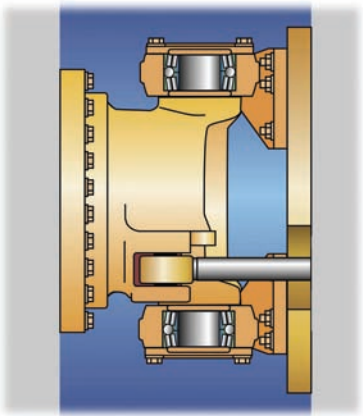


*Smooth/Padfoot Combination Drum – Padfoot drum for cohesive silts and clays. Smooth drum for semi-cohesive and granular material.*

- **Efficient Engine** – The SV510-III Series are powered by a low noise, low maintenance, 148 hp Cummins water-cooled, turbocharged diesel engine. This engine provides high fuel efficiency and fully complies with current EPA/CARB emission standards. This turbocharger has plenty of power and has shown excellent performance even at higher elevations. The engine is mounted on rubber isolators to provide added vibration isolation. The engine hood is noise-suppressed and has gas spring cylinders that provide easy access for maintenance.

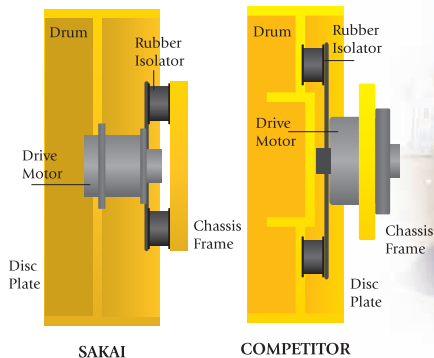
### Heavy-Duty Components

- **Unique Hitch Design** – All Sakai vibratory compactors feature a unique heavy-duty hitch design that is stronger than competitive models. The system consists of taper roller bearings for articulation and a large ball bearing for oscillation. This joint system provides unmatched chassis stability that keeps the drum and wheels in contact with the ground over the roughest terrain. Lubrication service intervals are only required at 250 hours or once per year. As a bonus, the operator benefits from smoother steering, control and comfort.



- **Patented Shock Isolation** – The Sakai patented shock isolation systems are completely independent of the drum drive system and are better designed and stronger than any other on the market today.

Located between the chassis frame and the drum drive motor, the shock isolators reduce the transmission of vibration back to critical machine components as well as to the operator.



Competitive machines place the shock isolators between the drum and the drive motor – meaning these isolators wear out faster because the drive torque is transferred to the drum through the rubber isolators – whether the vibration system is on or off. This wear then causes the machine to jerk with changes in direction and results in an irregular or rough compaction surface.

### High Safety Standards

- **ROPS and Seat Belts** – Sakai believes that operator safety is a high priority. ROPS and seat belts are standard equipment on every Sakai roller sold in North America.

- **Failsafe Braking System** – The SV510-III Series is equipped with a two brake, three-way failsafe system. A hydrostatic service brake is located at the forward-reverse lever. A wet disc, spring-applied, hydraulically-released (SAHR) parking brake switch is located on the instrument panel. An emergency brake foot pedal activates both the hydrostatic and the SAHR brakes, and will automatically apply in the event of an engine or hydraulic system failure.



### Operator Comfort

The SV510-III Series operator's station is a rubber isolated floating deck designed to minimize the transmission of vibration to the operator and is accessible from both sides of the machine. All instrumentation and controls are conveniently located within reach and are easily visible – reducing operator fatigue. The machines also provide exceptional side clearances for confined spaces.

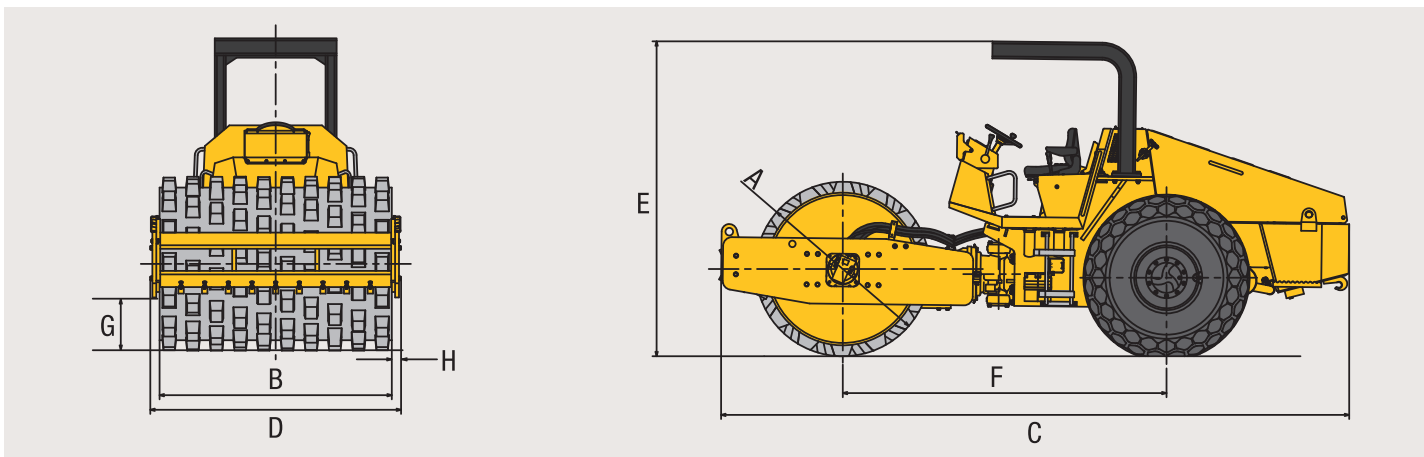
### Superior Serviceability – Fast Support

The SV510-III Series provides a fully opening engine hood for easy access to all main components including the engine, radiator and hydraulic components. The hydraulic system includes conveniently located pressure gauge ports. The vibrator bearing lubrication system consists of an oil bath that keeps the system lubricated even on steep grades.

Sakai has been building high quality construction equipment since 1918. We manufacture more vibratory compactors annually than anyone else in the world. Sakai stocks component parts for all its products and if necessary, they are available via over-night dispatch from their North American headquarters in Georgia. See your local dealer or call (800) 323-0535 for prompt assistance with all your application and service needs.



MODEL		SV510D-III	SV510TB-III	SV510TF-III	SV510T-III
Operating Weight	lbs	23,525	25,375	29,255	24,320
	kg	10,671	11,510	13,270	11,032
On Front Drum	lbs	12,700	14,525	18,475	13,470
	kg	5,761	6,589	8,380	6,110
On Rear Axle	lbs	10,825	10,850	10,780	10,850
	kg	4,910	4,922	4,890	4,922
Minimum Vibration Frequency VPM		1,650	1,650	1,650	1,650
	Hz	27.5	27.5	27.5	27.5
Maximum Vibration Frequency VPM		2,200	2,200	2,200	2,200
	Hz	36.7	36.7	36.7	36.7
Centrifugal Force - lo	lbs	38,580	41,890	41,890	41,890
	kN	171.6	186.3	186.3	186.3
Centrifugal Force - hi	lbs	50,710	55,120	55,120	55,120
	kN	225.6	245.2	245.2	245.2
Nominal Amplitude	inches	0.04 - 0.08	0.04 - 0.08	0.03 - 0.07	0.04 - 0.08
	mm	1.01 - 1.81	1.01 - 1.81	0.76 - 1.78	1.01 - 1.81
Engine Make & Model		Cummins QSB4.5			
Horsepower	hp / kW	148 - 110.4	148 - 110.4	148 - 110.4	148 - 110.4
Maximum Speed	mph / kmh	6.2 / 10.0	6.2 / 10.0	6.2 / 10.0	6.2 / 10.0
Gradability	percent	62	62	62	62
Tires		23.1 - 26-8PR(OR)	23.1 - 26-8PR(OR)	23.1 - 26-8PR(OR)	23.1 - 26-8PR(OR)
Fuel Tank Capacity	gallons / liters	66 / 250	66 / 250	66 / 250	66 / 250
Braking Types		Dynamic Hydrostatic, Wet Disc, SAHR with Footbrake			
Steering Type		Center-Point Articulated with Heavy-Duty Hitch			
Articulation Angle	degrees	37	37	37	37
Outside Turning Radius	inches	221	221	221	221
	mm	5,613	5,613	5,613	5,613
Oscillation Angle	degrees	7	7	7	7
<b>DIMENSIONAL DATA</b>					
Drum Diameter A	inches / mm	60 / 1,524	63 / 1,600	65 / 1,651	63 / 1,600
Drum Width B	inches / mm	84 / 2,134	84 / 2,134	84 / 2,134	84 / 2,134
Overall Length C	inches / mm	227 / 5,766	244 / 6,198	227 / 5,766	227 / 5,766
Overall Width D	inches / mm	91 / 2,311	110 / 2,794	91 / 2,311	91 / 2,311
Overall Height E	inches / mm	114 / 2,896	114 / 2,896	114 / 2,896	114 / 2,896
Wheelbase F	inches / mm	117 / 2,972	117 / 2,972	117 / 2,972	117 / 2,972
Curb Clearance G	inches / mm	18.5 / 470	18.5 / 470	18.5 / 470	18.5 / 470
Side Overhang H	inches / mm	3.3 / 85	3.3 / 85	3.3 / 85	3.3 / 85



**SAKAI**

MASTERS OF COMPACTION

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Your authorized Sakai dealer:

