



MACHINE CHOICES

VIBRATORY SOIL COMPACTORS SELECTION GUIDE



CHOOSING THE RIGHT MACHINES FOR THE JOB

Every job estimate starts with putting together the list of equipment needed. It isn't enough to ask yourself, **Which machine can do the job?** It's more important to figure out which machine(s) can perform the required tasks as quickly and cost-effectively as possible.

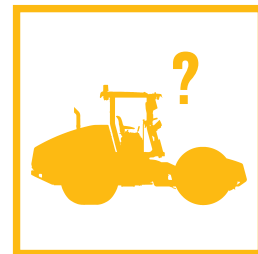
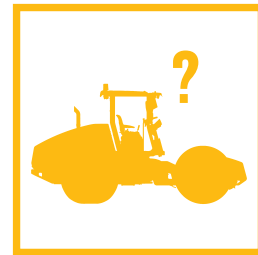
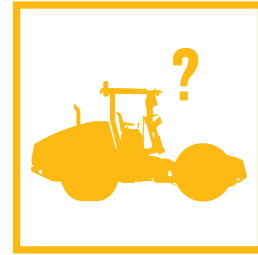
With so many choices among the types and models of machines available today, **how can you make sure the machine you select is precisely the right one for your job?**

And given the substantial investment you make in a machine up front, plus the cost of operation and maintenance, the question also becomes — **Which machine will do the most to make you more competitive and more profitable?**

INFORMATION IS YOUR MOST POWERFUL SELECTION TOOL

Of course, the key to making the best choice is pulling together good information that helps you compare options, costs and projected returns. Here's a checklist of information must-haves:

- Define the requirements for the equipment
- Consider any regulatory requirements
- Know the application characteristics
- Calculate the unit cost of production for each choice
- Compare machine sizes and their specifications
- List available tools and attachments
- Check the availability of parts and service
- Define cash flow needs
- Search for financing options
- Validate equipment safety

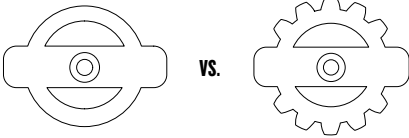


VIBRATORY SOIL COMPACTORS

Vibratory Soil Compactors can be used for a variety of applications. Technology has improved their safety, productivity and efficiency. You should consider the CS10 GC, CS11 GC, CS12 GC, CS54B and CS56B models for these types of applications:

TYPICAL APPLICATIONS

- Building construction
- Roadbuilding
- Site preparation
- Trench and slope work

<h2>PERFORMANCE:</h2>	<h3>SMOOTH DRUM VS. PADFOOT DRUM</h3> <p>Material type should be the driving factor when choosing between a smooth drum versus a padfoot drum. For more granular materials, which have relatively larger particle sizes, the smooth drum is generally the best option. When you're trying to compact a cohesive material, typically characterized by relatively smaller particle sizes, the padfoot drum is your best bet.</p> 
<p>Turn to the Cat® Performance Series when utilization is high, generally over 600 operating hours per year. Designed for deep trench work, steeper slopes and more demanding site and material conditions. The Performance Series is ideal for larger infrastructure projects.</p>	<h2>GC:</h2>
<p>.....</p> <h1>600</h1> <p>OPERATING HOURS PER YEAR</p> <p>.....</p>	<p>The Cat GC models are designed to deliver on jobs that generally require less than 600 operating hours per year in less demanding applications like roadbuilding and site preparation. GC models are excellent for low to medium slopes and more typical moisture/humidity conditions, all while delivering dependable performance at an affordable price point.</p>



THE CAT® CS54B AND CS56B VIBRATORY SOIL COMPACTORS

With a full line of vibratory soil compactors, featuring nearly two dozen models, making your decision can be difficult. The Cat CS54B and CS56B Vibratory Soil Compactors are two of the most productive and popular medium-sized models in the performance series. Check out the differences and similarities:

CS54B	CS56B
Powered by the 98 kW (131 hp) Cat® C4.4 engine	Powered by the 117 kW (156.9 hp) Cat® C4.4 engine
Ideal for granular soil compaction applications	
Features the virtually maintenance-free, pod-style vibratory system	
Moderate Slopes – dual pump propel system offers theoretical gradeability up to 55%*	Steep Slopes – dual pump propel system offers theoretical gradeability above 65%*
No blade option available	Blade option available
Eco-mode is standard for improved fuel efficiency	
Standard automatic speed control helps promote consistent compaction	
Available technologies include MEASURE – MAP – CONNECT. (See technology section for further details)	Available technologies include MEASURE – MAP – CONNECT – COMMAND. (See technology section for further details)
Exceptional operator comfort and technician serviceability	

*Actual gradeability may vary based on site conditions and machine configuration. Refer to the Operation and Maintenance Manual for more information.

SOIL COMPACTORS KEY SELECTION CONSIDERATIONS

APPLICATION PROFILE

How many hours of operation do you need your soil compactor to work? Are your jobs large infrastructure projects or do they consist more of general construction and site-prep work? What you do and how often you do it are key factors in selecting between the GC and Performance Series.

SITE AND MATERIAL CONDITIONS

Job conditions are typically the most important selection criteria. Low to medium slopes and normal material moisture conditions tend to lend themselves to the GC product as the best value. In situations where slope work consistently gets above 30%, conditions are very wet and muddy, or have uniform sand. Also attachments like a blade are needed, the Performance Series should be strongly considered.

PERFORMANCE FEATURES

Depending on your application and site conditions, horsepower considerations, one vs. two propel pumps, weight requirements and even drum size and type are all key factors in selecting the right machine. Fuel efficiency is also always critical, so consider options or equipment that provide features and technologies that can help reduce consumption.

COMFORT, SAFETY AND SERVICEABILITY

Your operator's comfort and safety are critical to maximizing productivity, as is ease-of-use of the machine itself. So is uptime and ease of maintenance and serviceability. Consider cab features, technology options and service accessibility when making your vibratory soil compactor selection.

TECHNOLOGY

Finding seasoned equipment operators has become an ongoing challenge, and this shortage can significantly slow down productivity on any job. Equipment manufacturers are continuously searching for ways to make machines easier to run for operators across all skill and experience levels, as well as to provide a safer work environment. Technology has become the go-to solution to help address these challenges.

Choosing a vibratory soil compactor with the right level of technology requires an understanding of the technology and how it can benefit your business. Check out the scalable technology available on both the GC and Performance Series (unless otherwise noted).



MEASURE

Machine Drive Power (MDP) and Compaction Meter Value (CMV) provide your operator an indication of material stiffness, allowing them to know whether they've reached compaction or not. Eliminate unnecessary passes and identify trouble spots during the compaction process, not afterwards.

MAP

Mapping technology ties a GPS location to your MDP and/or CMV values. Keep track of pass count and coverage, along with other compaction parameters in real time. Your operator can now visualize the work as it is happening and the data can be accessed in the back office for full documentation of the compaction process.

CONNECT

Machine to machine communication allows compactors working on the same site to share their mapped compaction data with each other. This level of technology can also connect your machine to the cloud (subscription dependent) so your mapping data can be accessed and monitored near-live from any device (through VisionLink). Finally, Connect technology allows you to obtain corrections signals from a Virtual Reference Station (subscription dependent).

COMMAND

This operator-assisted, semi-autonomous technology automates the compaction process. Speed, direction, steering and the vibration system can all be controlled to provide maximum consistency. Command is only available on specific Performance Series Models.

HOW DO I KNOW WHAT I NEED?

Technology is an investment, so take into account some of the following questions and considerations before you decide what you need.

- Know what type of tasks you need to accomplish and where.
- Try out technology on a rental machine or in your dealer's demo area.
- Understand how factory-integrated technology differs from aftermarket systems.
- How long to get your machine calibrated and ready to work?
- Can you get on-site training?
- Allow yourself a couple of months of using it before determining its effectiveness.

SELECTION GUIDELINES-AT-A-GLANCE		
	GC-SERIES	PERFORMANCE SERIES
Annual operating hours	< 600 hrs	> 600 hrs
Slope conditions	< 30 percent	> 30 percent
Material conditions	Typical humidity	Wet/muddy conditions or uniform sand
Blade option	No	Yes
Horsepower	120 hp	157 hp
Technology needs	Measure Map Connect	Measure Map Connect Command
Safety	Similar features available, check with your Cat® dealer to ensure your machine has the features you require.	

MAXIMUM FLEXIBILITY

The Cat® GC provides additional flexibility which can maximize your investment. Flexible XT weight kits allow you to upgrade the weight of your machine to match different site conditions and governmental requirements.

DO YOU NEED A BLADE?

Many times the use of a blade on Vibratory Soil Compactors is critical for the job at hand and for maximum productivity. This typically requires additional horsepower as well as two propel pumps. If a blade is needed, the Performance Series is the better option.

QEXQ2879-01 (09-2022)
N Am

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at www.cat.com.

© 2022 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow," the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options. VisionLink is a trademark of VisualSite LLC, registered in the United States and in other countries.

