



MACHINE CHOICES

# WHEEL LOADER 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.

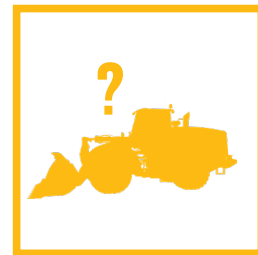
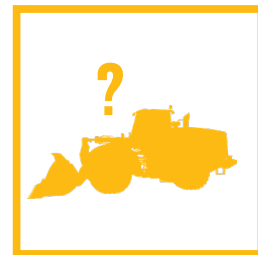
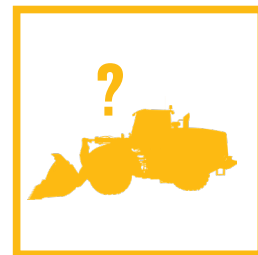
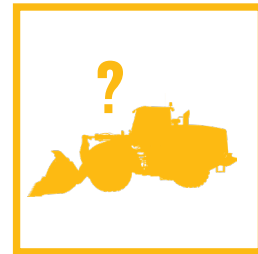
With so many choices among the types and models of construction machines available today, **How can you make sure the machine you select is precisely the right one for your job?**

And given the substantial investment you make in a machine up front plus operation and maintenance over its life, 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:

- Know the application characteristics
- Define the requirements for the equipment
  - Material Densities
  - Production Targets
  - Size
  - Target Bucket Payload
  - Versatility
- Consider any regulatory requirements
- Calculate the unit cost of production for each choice
- Compare machine sizes and their specifications
- Consider technology features and options
- List available buckets and attachments
- Check the availability of parts and service
- Define cash flow needs
- Search for financing options
- Validate equipment safety





## WHEEL LOADERS – PRODUCTIVE AND VERSATILE

Wheel loaders make your material handling and loading jobs safer, faster, more precise and profitable. Today's loaders offer reliability, productivity, fuel efficiency, versatility and operator comfort. And considering the front-end options available beyond just a bucket, wheel loaders become an integral part of most any jobsite.

### TYPICAL APPLICATIONS

Wheel loaders can be used for a variety of applications. Technology has expanded their safety and payload capabilities and efficiency. You should consider a wheel loader for these types of applications:

- Asphalt Plant
- Batch Plant
- Block Handling
- Millyard
- Ports Handling
- Quarry
- Sand & Gravel Pit
- Sewer & Water Line Construction
- Steel Mill
- Underground Mining
- Waste Transfer
- Yard Loadout

### SPECIALTY CONFIGURATIONS

Cat® medium wheel loaders have application-specific arrangements available from the factory for added durability in the toughest conditions for:

- Aggregate Handler
- Block Handler
- Forestry Arrangement
- Scrap Arrangement
- Steel Mill Configuration
- Waste Configuration

### VERSATILITY OPTIONS

Special configurations may include these options:

- Fusion™ coupler and attachments
- Transmissions, axles and traction aids
- Machine and cab guarding
- Protection and safety features
- Tires matched to applications
- Corrosion package



CAT

## WHEEL LOADERS

### STANDARD

Cat GC wheel loaders are the standard models, designed to deliver on jobs that don't require advanced technology, just dependable performance at a lower acquisition cost and low operating costs.

### PERFORMANCE

Cat performance wheel loaders offer significant fuel savings and lower long-term costs, while delivering performance and productivity. With multiple size classes, versatility and reliability, they are an ideal choice for most any job.

### PREMIUM

Cat XE wheel loaders are the premium offering with an advanced powertrain and operational technologies, which deliver class-leading fuel efficiency as well as simplified, refined operation for the operator.

## FACTORS THAT HELP YOU CHOOSE THE RIGHT SIZE

The best way to figure out the most efficient and productive wheel loader for the job is to run the numbers. Here are some factors to consider:

- Understand the range of material densities to be moved
- Define site parameters and dimensions and calculate travel distance and load-over-height requirements
- Identify the production targets
- Match the machine to the size and capacity of a bucket needed to meet production targets
- Identify the most efficient truck pass match to meet production targets





# KEY SELECTION CONSIDERATIONS

## SIZE AND POWER

Cat wheel loaders are designed and built for a variety of applications and jobs. Always consider the physical layout and ground conditions of your jobsite and select a wheel loader that is capable of maneuvering within those parameters.

The fundamentals of size selection start with understanding the payload/production targets and the range of material densities being moved. These factors will also help you determine the right combination of bucket and machine best suited to achieving production targets. If choosing a wheel loader with forks, determine the size and weight of objects being moved.

Since wheels on the ground and traction are critical to loader cycle times, counterweight size requirements are also important.

## INTERACTION WITH FACILITIES AND OTHER EQUIPMENT

Will your wheel loader be interacting with other equipment, such as trucks or hoppers? If so, consider load-over-height and width requirements, pass match volumes and cycle times when choosing your wheel loader. Another consideration is whether your loader will maintain consistent and significant load and carry distances versus strictly working at the stockpile.

## COMFORT, SAFETY AND SERVICEABILITY

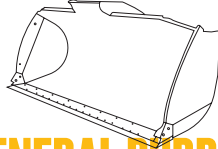
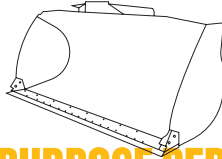

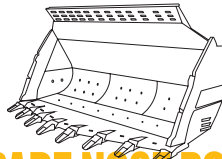
Your operator's comfort and safety are critical to maximizing productivity, as is ease of use of the machine itself. So are uptime and ease of maintenance and serviceability. Consider cab features, technology options and service accessibility when making your wheel loader selection.

## OWNERSHIP AND COMPONENT REBUILDABILITY

Consider your expected lifetime hours/component rebuildability requirements so you can ultimately determine the lowest total lifetime cost to best meet your needs.

# BUCKET SELECTION

Bucket selection is critical when it comes to wheel loaders. The right size, configuration and wear impact productivity. Here are a few common bucket options matched to material types. This is just a small sampling of what's available, so be sure to talk to your Cat dealer about what specialty options are available that may be a better fit for your jobs.

 <p><b>GENERAL PURPOSE</b></p> <p>A good choice if you're working with a wide variety of materials. Especially designed for lighter materials — sand, gravel, soil or crushed stone.</p>	 <p><b>GENERAL PURPOSE PERFORMANCE</b></p> <p>Provide higher fill factors and material retention in load and carry applications, as well as grading, leveling and dumping in a wide variety of applications and materials.</p>
 <p><b>FLAT FLOOR PERFORMANCE</b></p> <p>Utilize a long flat floor that delivers improved results when back dragging and grading.</p>	 <p><b>SPADE NOSE ROCK</b></p> <p>Rock buckets are designed to move just that: sand, gravel, coal seam, limestone, gypsum and more.</p>

BUCKET TYPE	MODELS				
	950, 962, 966, 972	980	982	986, 988	990, 992
General Purpose	X	X	X	X	X
Heavy Duty		X	X	X	X
Abrasion			X	X	X
General Purpose Light Duty			X		
Material Handling	X	X	X	X	X
Heavy Duty Material Handling			X	X	X
Spade Nose Rock		X	X	X	X

\*Check with your dealer to discuss bucket types.

## MORE ATTACHMENT CHOICES

Due to the flexibility and versatility of wheel loaders, dozens of additional and specialty attachments, quick couplers, blades, forks and brooms are available. See your Cat dealer to determine what is available for your wheel loader model.

## CONSIDER A QUICK COUPLER FOR FAST CHANGES

For maximum versatility, the optional Fusion quick-coupler control features a selectable kickout to adjust for efficient bucket and fork applications.





## CHOOSE THE RIGHT TIRES

Selecting the best wheel loader tires for the application can make a significant difference between underperforming or excelling on jobsites. Choosing the correct tire for the application improves cycle times and saves on operating costs.

**TIRE TIME AND INFLATION PRESSURE ARE CRITICAL FOR THE PERFORMANCE, STABILITY, RIDE QUALITY AND EFFICIENCY OF YOUR LOADER.**

### RADIAL TIRES

- Have less flex and tend to have better control at higher speeds
- Lower rolling resistance allows operators to turn easier
- Ideal choice in applications where traction, tread wear and distance are key factors

### BIAS TIRES

- Thicker sidewalls resist cutting in gravel or abrasive materials and deliver a stable, smooth ride
- More repairable for extended life

### SOLID TIRES

- Typically used in scrap yards and industrial applications with severe underfoot conditions

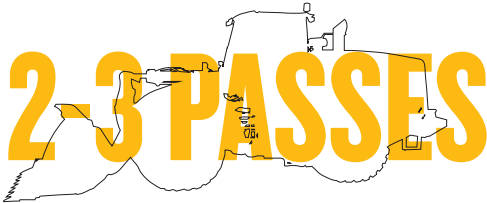
### FLOTATION TIRES

- A wider tire that works well in softer, muddy conditions to aid traction

WHEEL LOADERS

# PRODUCTIVITY TIPS AND FACTS

For increased productivity, greater efficiency in moving material and improved fuel efficiency, consider the following best practices when operating your wheel loader.



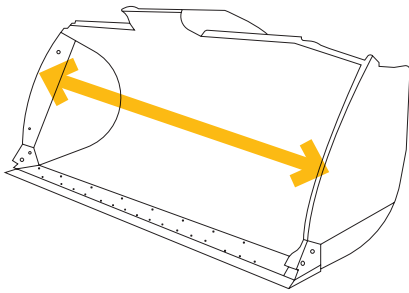
## DID YOU KNOW?

If your production demands are high enough, there are many benefits to a 2-pass machine/bucket configuration.

- 2-3 passes for on-highway truck loading
- 3-5 passes for off-highway truck loading

## MAXIMIZING PRODUCTIVITY EASY AS 1,2,3

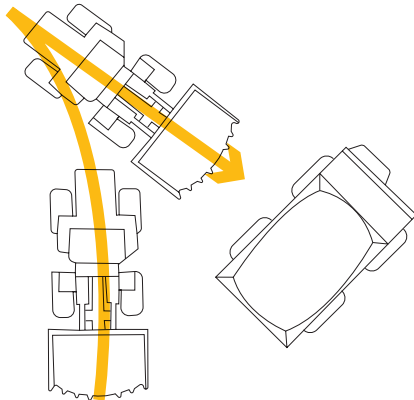
- 1 Consider the capacity of the machine you're loading.
- 2 Determine how many loads you need to move each day.
- 3 Select the bucket size that gives you the ideal pass match.



## TIPS ON BUCKET SIZE

It may make sense to determine your bucket size first, then select the machine that can accommodate it — not the other way around.

A bigger bucket means more production, right? Not always. If you're using a bucket that pushes your machine over its recommended lift capacity, you risk accelerating wear, reducing component life and having unplanned failures. Any short-term gains could be offset by repairs and downtime.



## GET THE ANGLE ON SHORTER CYCLE TIMES

Always position the truck you're loading at a 45-DEGREE ANGLE to the face of the material to maximize cycle time efficiency.

## MINIMIZE GROUND CONTACT

The cutting edge of the bucket should not touch the ground more than 15 to 40 centimeters before the face of the material. This reduces bucket wear and material contamination. It also improves speed and reduces fuel consumption since there is no unnecessary friction between bucket and ground.



# TECHNOLOGY CAN ADD SPEED AND EFFICIENCY

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 wheel loader with the right level of technology requires an understanding of the technology and how it can benefit your business.

TECHNOLOGY	WHAT IT DOES	KEY BENEFITS	INVESTMENT
<b>Cat Payload</b>	An onboard scale system that provides on-the-go weighing of material in the bucket	<ul style="list-style-type: none"> <li>Improves loading accuracy, efficiency and overall productivity</li> <li>Checks truck and target weight, pass count and progress from the in-cab monitor while at the stockpile</li> <li>Cat Payload with production measurement delivers low level weight and tipoff functionality for faster cycle times</li> </ul>	<ul style="list-style-type: none"> <li>Standard on some wheel loader models</li> <li>ROI begins first job</li> </ul>
<b>Cat Payload with Assist</b>	Enhances productivity and efficiency by guiding you to wheel loader features	<ul style="list-style-type: none"> <li>Auto Set Tires is standard and helps prevent tire spin</li> <li>Autodig is standard</li> <li>Allows creation of application profiles for quick setup</li> </ul>	<ul style="list-style-type: none"> <li>Standard on some wheel loader models</li> <li>ROI begins first job</li> </ul>
<b>Advanced Payload</b>	Enhances Cat Payload with improved accuracy across materials, bucket angles and grades	Includes Enhanced List Management and Tip Off Assist as well as Dispatch for Loading to reduce waste	<ul style="list-style-type: none"> <li>Optional on some wheel loader models</li> <li>ROI begins first job</li> </ul>
<b>Cat Productivity</b>	App for tracking progress and understanding operations	Improves efficiency by optimizing operations	Subscription option
<b>Cat Detect</b>	Enhances awareness of the environment around the working equipment	Provides alerts to help keep people and assets safe on the jobsite	Optional
<b>Cat Product Link™</b>	Wirelessly connects you to your equipment	Provides access to essential information to help you run your business	Standard

## HOW DO I KNOW WHAT I NEED?

Technology is an investment, so take into account some of the following questions and considerations before you make decisions on what you do or don't 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 the level of technology needed by job requirements and compare those to standard factory-integrated technology.
- Identify how long it will take to get your machine calibrated and ready to work.
- Determine if onsite training is needed/available.
- Review availability of technology upgrades and installation so you can grow wheel loader technology with your business.
- Allow yourself a couple of months of using it before determining its effectiveness.

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

