



# QUARRY & AGGREGATES INDUSTRY SOLUTIONS

TO LOWER YOUR COST PER TON



Caterpillar and your Cat® dealer have the products, work tools and services to support nearly every aspect of your business. We package our equipment and capabilities into site-specific systems that improve productivity and reduce cost per ton.

WORK SAFELY / OPTIMIZE PRODUCTION / REDUCE COST PER TON / DEMONSTRATE ENVIRONMENTAL RESPONSIBILITY									
Planning, Community Engagement, Permitting	Stripping, Site Prep, Reclamation	Drilling, Blasting, Ripping	Loading	Hauling	Road Maintenance	Material Processing	Finished Product Load-out	Fleet Maintenance	Plant Maintenance
Page 4	Page 5	Page 7	Page 9	Page 11	Page 13	Page 14	Page 15	Page 16	Page 17
CAT PRODUCTS & SERVICES									
Fleet Productions & Cost Analysis (FPC)	Hydraulic Excavators	Track Drills	Medium Wheel Loaders	Quarry Tracks	Motor Graders	Power Systems	Medium Wheel Loaders	Product Link™	Telehandlers
Value Estimating Tool (VET)	Articulated Trucks	Rotary Drills	Large Wheel Loaders	Articulated Trucks	Water Wagon Quarry Trucks	Medium Wheel Loaders	Large Wheel Loaders	Vision Link	
Job Site Solutions	Vocational Trucks	Track-Type Tractors	Hydraulic Excavators	Vocational Truck	Water Wagon Articulated Trucks	Compact Wheel Loaders	Hydraulic Excavators	VIMS	
	Motor Graders	Hydraulic Excavators	Front Shovels	Conveyors	Wheel Dozers	Skid Steer Loaders	Articulated Trucks		
	Wheel Tractor-Scrapers		Draglines	Production Analysis Team	Track-Type Tractors		Vocational Truck		
	Track-Type Tractors		Production Analysis Team	Compact Wheel Loaders	Diesel-electric Locomotive				
	Track-Type Loaders		Skid Steer Loaders						
	Wheel Loaders								
	Skid Steer Loaders								
CAT COUPLERS / WORK TOOLS & GROUND ENGAGING TOOLS / Page 18									
QUICK COUPLERS, BUCKETS, HAMMERS, RIPPERS, FORKS, BLOCK HANDLERS, GET									
CAT DEALER SUPPORT / Page 20		NEW, USED, RENTAL & CAT CERTIFIED REBUILD OPTIONS, FINANCING & INSURANCE, NEW & REMANUFACTURED PARTS, CUSTOMER SUPPORT AGREEMENTS, OPERATOR TRAINING, EQUIPMENT MANAGEMENT							





# THE CAT<sup>®</sup> SYSTEMS ADVANTAGE

## Why choose Cat?

**IMPROVE PRODUCTIVITY.** Each piece of Cat equipment is a system of integrated components, designed to deliver the most production at the lowest cost. Individually, our products are great producers. Collectively, they're exceptional.

**INCREASE EFFICIENCY.** Our loading and hauling tools are designed to work as synchronized teams, with even pass matching to streamline the loading cycle.

**BOOST OPERATOR PERFORMANCE.** Comparable cab designs, especially within product families, help operators work efficiently on multiple machines with less training.

**CAPTURE & USE DATA FOR FLEET MANAGEMENT.** Common technologies applied across the product line provide an efficient way to gather data, integrate it and use it for equipment management decisions.

**INCREASE UPTIME & REDUCE SUPPORT COSTS.** Common maintenance and services processes reduce downtime. Common parts and components throughout the product line improve reliability and decrease support costs.



# PLANNING, COMMUNITY ENGAGEMENT, PERMITTING

## Off to the right start

Whether you're developing a new operation or expanding an existing one, the early phases of the process are challenging and time-consuming. Our tools and services can help you consider alternative fleets and assess site-specific challenges.

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**FLEET PRODUCTION & COST ANALYSIS (FPC)** lets you compare various fleet options on the basis of productivity, time and cost.

**VALUE ESTIMATING TOOL (VET)** helps you estimate the life cycle costs and profit potential of Cat machines versus other manufacturers' models.

**JOB SITE SOLUTIONS** work with experts from Caterpillar who will visit your site, analyze its unique challenges using a rigorous, fact-based process, then recommend ways to optimize your productivity and cost per ton.







# STRIPPING, SITE PREPARATION AND RECLAMATION

## Preparing for a successful future

Overcome the challenges you face gearing up for production—clear the land, build berms, construct haul roads, plan for reclamation, begin removing overburden—and do it all in a way that's fast, efficient and environmentally responsible.

**HYDRAULIC EXCAVATORS** are powerful, versatile and fuel efficient with rugged structures and multiple boom and stick configurations that let you take on a variety of high-volume earthmoving jobs.

**ARTICULATED TRUCKS** feature advanced drive train technology and innovative traction control systems to boost productivity in poor underfoot conditions. A unique ejector body configuration lets you spread and dump on the go, saving time and money.

**VOCATIONAL TRUCKS** have a heavy-duty chassis, front and rear anti-lock braking systems and multiple suspension and axle configurations so you can optimize your truck to match your hauling needs.

**MOTOR GRADERS** equipped with automatic blade control systems help you get to grade faster with fewer passes.

**WHEEL TRACTOR-SCRAPERS** load and dump on the run to reduce cycle time.

**TRACK-TYPE TRACTORS AND LOADERS** move material efficiently, whether the job demands dozing, ripping or loading.

**WHEEL LOADERS AND SKID STEER LOADERS** perform multiple material handling tasks.





# DRILLING, BLASTING AND RIPPING

## Releasing the rock

Drill and blast or rip and release? Your decision depends on many factors, including the structure of the rock formation, accessibility to the face and safety and environmental issues. No matter which method you choose, the objective is always safe, efficient, economical performance.

**TRACK-TYPE TRACTORS** equipped with rear-mounted rippers work productively in open areas, offering excellent maneuverability, traction and stability.

**HYDRAULIC EXCAVATORS** equipped with performance-matched ripping tools excel in jobs requiring selective extraction. A Cat quick coupler lets an operator change ripper to bucket in less than 30 seconds for high productivity in rip-and-load applications.

**TRACK DRILLS** feature an innovative carousel rod changer that reduces cycle time, plus boom extensions that broaden drill pattern coverage, allowing more drilling with less setup time.

**ROTARY DRILLS** deliver high productivity and long life with heavy-duty structures, fast cycle times, quick pipe changes, a comfortable work environment and convenient service access.

RIPPER MATCHING GUIDE		HYDRAULIC EXCAVATORS							
RIPPERS		320	323	324	329	336	349	374	390
	TR-40-N								
	TR-45-N	•	•	•	•				
	TR-55-N					•	•		
	TR-70-N							•	•
	TR-99-N								•



			WHEEL LOADERS									
ARTICULATED TRUCKS		Bucket Size	938	950	962	966	972	980	988	990	992	993
			2.3 - 3.0	2.7 - 4.0	2.9 - 4.3	3.5 - 4.8	3.8 - 5.5	4.2 - 6.1	6.4	2.3 - 3.0	2.3 - 3.0	2.3 - 3.0
			2.8	3.3	3.8	4.5	4.8	5.7	6.9	2.8	2.8	2.8
	Max. payload	Capacity m <sup>3</sup> **										
725	23.6	14.3	5 - 6	4 - 5	3 - 4	3 - 4	3	2.3				
730	28.1	16.9	6 - 7	5 - 6	4 - 5	4	3 - 4	3 - 4				
730 Ejector	28.1	16.9	6 - 7***	5 - 6	4 - 5	4	3 - 4	3 - 4				
735	32.7	19.7	7 - 8***	6 - 7	5 - 6	4 - 5	4	3 - 4				
740	39.5	23.1			6 - 7	5 - 6	4 - 5	4 - 5				
740 Ejector	39.5	23.1			6	5 - 6	4 - 5	4 - 5				
QUARRY TRUCKS	Payload t*											
770	36.3	25.1						4 - 5***	3			
772	46	31.1						5***	3 - 4			
773	55	35.1							4 - 5	3		
775	63.5	41.9							5 - 6	4	3 - 4	
777	90.7	60.2								6	4 - 5	
785	133	78										6***
VOCATIONAL TRUCKS	See your local Cat dealer for available options.											
CT660												

HYDRAULIC EXCAVATORS			
336	349	374	390
1.1 - 2.3	2.4 - 3.0	3.7 - 5.0	4.1 - 6.0
2.4	2.8	4.6	5.7
6 - 7	5 - 6	3 - 4	
8	6 - 7	4	3 - 4
8	6 - 7	4	3 - 4
		4 - 5	3 - 4
		5 - 6	4 - 5
		5 - 6	4 - 5
		5	4
		6 - 7	5
			6
			8

Note: Pass match has been calculated by using a fill factor of 90%, a material density of 1,700 kg/m³ and by selecting the ME (Mass Excavation) boom with short stick. \*Target Payload \*\*Heaped 2:1 \*\*\*With high lift option







# LOADING

## Optimizing cycle time

How efficiently you get material into a hauler and on its way to the processing plant has a big impact on your bottom line. To minimize cost per ton, you need the right type and number of loading and hauling tools, sized to work together efficiently, plus a well-designed loading setup and a team of quality operators.

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**WHEEL LOADERS** feature powerful hydraulics and an operator-friendly cab for productive loading in multiface applications when mobility and versatility are critical.

**HYDRAULIC EXCAVATORS** work quickly and efficiently in “sit and swing” operations, in confined spaces and on jobs that require loading from above the truck.

**FRONT SHOVELS** offer high breakout forces, high bucket fill factors and quick cycle times for fast, efficient loading from high, tight benches.

**DRAGLINES** deliver lowest cost-per-ton loading with an average operating life of 40 years.

**CATERPILLAR PRODUCTION ANALYSIS TEAM** analyzes site conditions and production data and recommends system-wide improvements to lower cost per ton.









# HAULING

## Material in motion

The system you choose to transport material to the processing plant depends on site conditions, travel distance and the volume you're moving, which is based on crusher capacity. Depending on your circumstances, the best option could be conveyors, quarry trucks, articulated trucks, vocational trucks or even large wheel loaders.

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**QUARRY TRUCKS** incorporate integrated power train components and innovative traction control technology for fuel-efficient performance when transporting large volumes of heavy material over long distances on well-maintained haul roads.

**ARTICULATED TRUCKS** leverage advanced suspension and traction control systems to improve performance on sites with steep grades, rough terrain, tight loading conditions and poor or non-existent haul roads.

**VOCATIONAL TRUCKS** carry material on- or off-road and feature a rugged chassis to absorb the stresses of haul road travel, plus multiple suspension and axle configurations to meet your unique needs.

**CONVEYORS** transport material over long distances safely, efficiently, economically and with reduced emissions.

**LARGE WHEEL LOADERS** feature a lock-up clutch and Cat Ride Control system for fast, fuel-efficient travel and a smoother ride in load-and-carry applications.

**CATERPILLAR PRODUCTION ANALYSIS TEAM** analyzes your entire hauling system and recommends improvements that drive down cost per ton.









# ROAD MAINTENANCE

## Protecting the lifeline of your production system

Good haul roads are at the heart of a great aggregates operation. Generally speaking, a good road is three truck-widths wide with a smooth surface, a constant eight to 10 percent grade, no blind spots, elevated curves, safety berms and effective drainage and dust control. Building and maintaining quality roads will improve fleet productivity and fuel efficiency, maximize component life and reduce cost per ton.

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**MOTOR GRADERS** are essential for haul road maintenance and feature intuitive joystick controls, excellent visibility and automatic blade control technologies that improve almost any operator's performance.

**WATER TRUCKS**, available in quarry, articulated or vocational truck configurations, distribute water efficiently, reducing dust and improving safety and productivity.

**WHEEL DOZERS** combine the production capabilities of track-type tractors with the mobility of wheel loaders.

**TRACK-TYPE TRACTORS** excel at cleanup and stockpile work.

**COMPACT WHEEL LOADERS** and **SKID STEER LOADERS** can be equipped with multiple work tools to perform a broad range of road maintenance jobs.



# MATERIAL PROCESSING

## Turning rock to profit

Crush, screen, blend, wash, stockpile, repeat. Although every producer has its own process for transforming raw materials into finished products, these are the key steps. We support your processing operation with power generation systems and utility machines that do a variety of jobs quickly and economically.

**POWER SYSTEMS** deliver reliable power, long life and world-class fuel efficiency to keep your processing plant running productively and economically.

**MEDIUM WHEEL LOADERS** equipped with standard Performance Series Buckets, Auto-dig and Ride Control System improve operator productivity and reduce fuel costs.

**COMPACT LOADERS** and **SKID STEER LOADERS** offer high breakout forces, fast cycle times and excellent versatility.

### ARTICULATED TRUCKS AND WHEEL LOADER MATCHING GUIDE

		938	950	962
ARTICULATED TRUCKS	Bucket size	2.3 - 3.0	2.7 - 4.0	2.9 - 4.3
		2.8	3.3	3.8
	Capacity m³*			
725	14.3	5 - 6	4 - 5	3 - 4
730	16.9	6 - 7	5 - 6	4 - 5
730 Ejector	16.9	6 - 7**	5 - 6	4 - 5
735	19.7	7 - 8**	6 - 7	5 - 6
740	23.1			6 - 7
740 Ejector	23.1			6





# WHEEL LOADERS

966	972	980	988
3.5 - 4.8	3.8 - 5.5	4.2 - 6.1	6.4 - 7.7
3.8	4.8	5.7	6.9
3 - 4	3	2 - 3	
4	3 - 4	3 - 4	
4	3 - 4	3 - 4	
4 - 5	4	3 - 4	
5 - 6	4 - 5	4 - 5	
5 - 6	4 - 5	4 - 5	

\*Heaped 2:1  
 \*\*With high lift option



# FINISH PRODUCT LOADOUT

## Ready for your customer

When it’s time to send your finished product into the marketplace, you need loading tools with speed, mobility and lifting force—and trucks that can deliver big payloads safely and efficiently.

**MEDIUM AND LARGE WHEEL LOADERS**, with their fast cycle times, deep pile penetration and high lift forces, give you the power to move loose materials fast.

**ARTICULATED TRUCKS** use advanced transmission technology and robust suspension and traction control systems to enhance productivity and fuel efficiency when hauling up steep grades and over slippery ground.

**VOCATIONAL TRUCKS** feature an aluminum alloy cab that offers durability at a lower weight for maximum payload over a longer life.



# FLEET MAINTENANCE

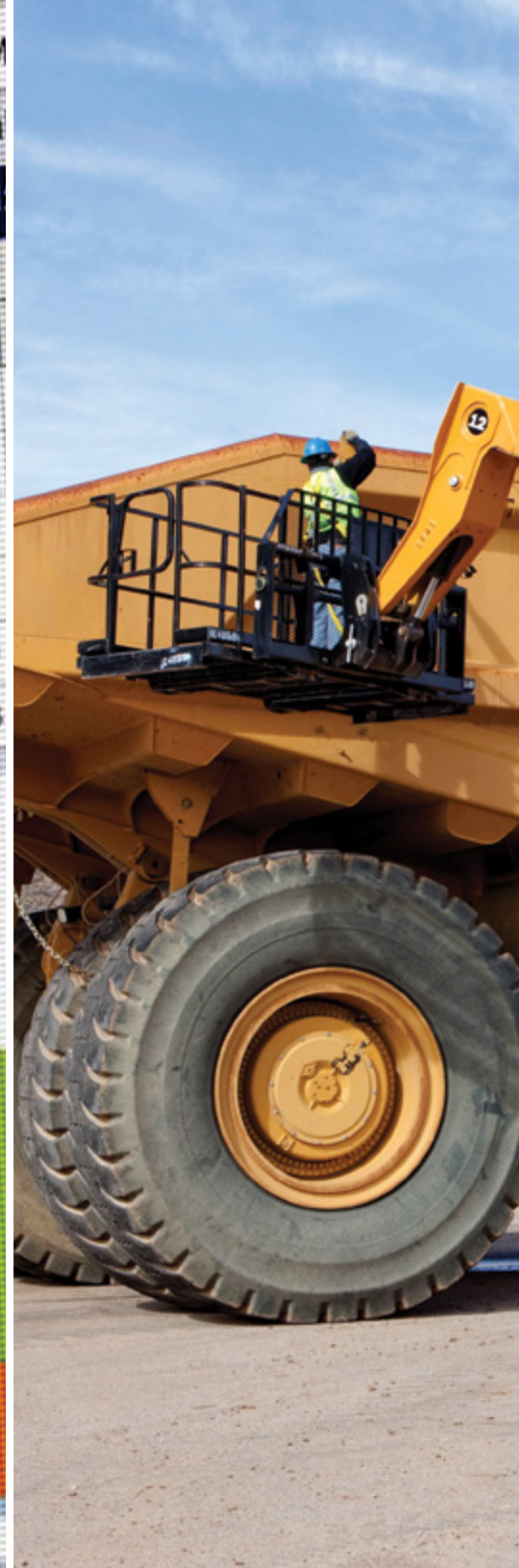
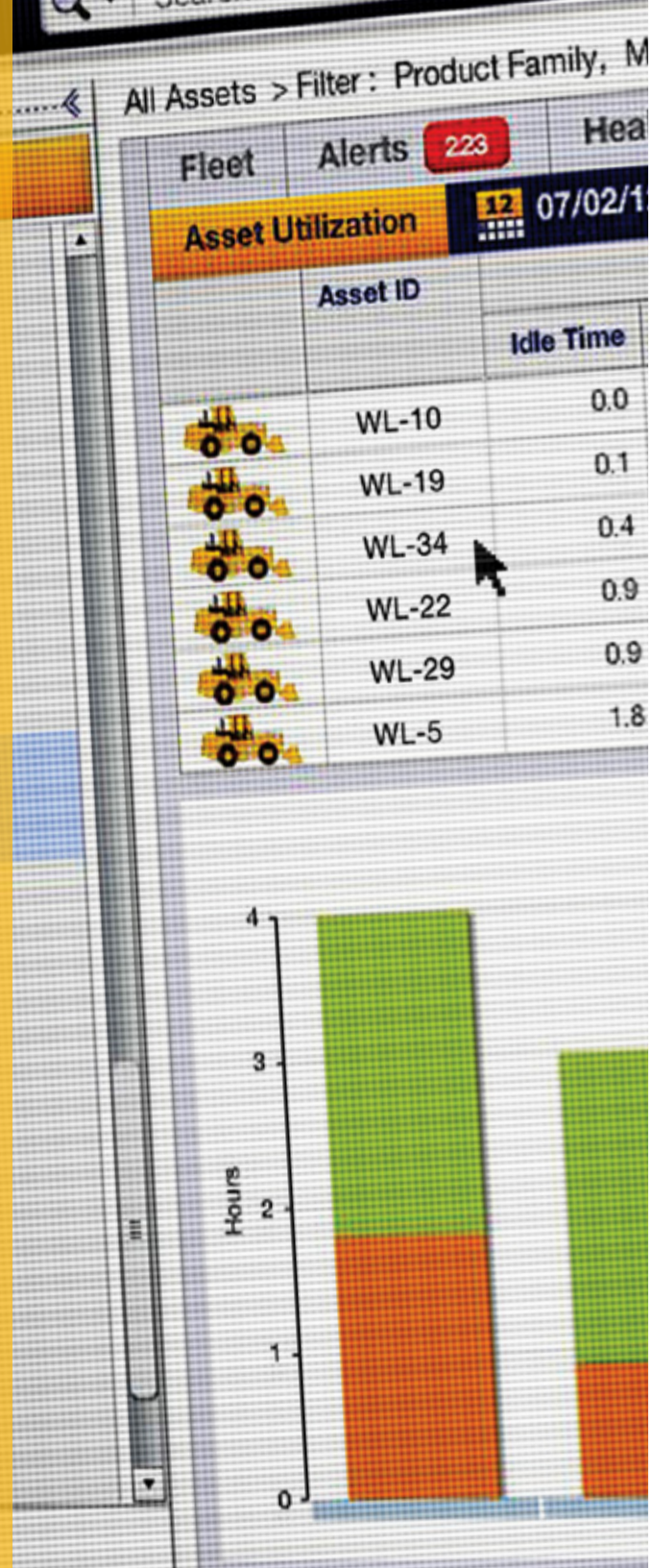
## More uptime at a lower total cost

Whether you maintain your own fleet or engage the services of your dealer, the goal is the same: keep the system up, running and producing product profitably. New monitoring tools and technologies help you manage maintenance and repair activities proactively so you can predict and prevent problems, avoid unexpected downtime and control costs.

**PRODUCT LINK™** is a remote monitoring tool that captures critical data used for equipment management decision-making. Standard on new Cat products, it can be added to previous-generation Cat machines and other manufacturers' equipment.

**VISION LINK** is an easy-to-use, web-based interface for Product Link that provides a quick way to view data from an entire fleet or individual assets. It allows monitoring from any device connected to the Internet.

**VIMS** gathers data from on-board electronic systems, detects potential problems and sends alerts as needed to operators, technicians, managers and others. It also captures production and performance data and produces reports that guide management decision-making.







# PLANT MAINTENANCE

## Maximizing the value of your assets

Every day your physical plant takes a beating. Dozens of maintenance and repair tasks are required to keep your assets in good working order. With versatile material handling equipment and a selection of work tools, you can do a variety of important jobs—efficiently and economically—and keep your investment delivering maximum returns.

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**TELEHANDLERS** provide the strength and power to move loads up and out. Their multiple steering modes improve mobility on rough terrain, and a large selection of work tools means you can do more jobs with one machine.









# COUPLERS, WORK TOOLS AND GROUND ENGAGING TOOLS

## System-designed for performance and versatility

When we say we design systems, we're not just talking about machines that work well together. We include couplers, work tools and Ground Engaging Tools in the total system, developing them in conjunction with one another so they can work together efficiently and deliver the highest performance at the lowest total cost.

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**COUPLERS** have a powerful effect on machine performance and productivity. Cat quick couplers allow fast tool changes so you can do more types of work in less time. They also permit you to use a common set of work tools with similarly equipped machines to reduce costs and improve flexibility.

**HAMMERS** deliver heavy forces and a high number of blows per minute to maximize productivity at the face and in secondary rock-breaking applications.

**RIPPERS** provide a cost-effective alternative to blasting in many situations. They can also be paired with a bucket for rip and load applications.

**FORKS** are available in a variety of sizes for efficient stacking, sorting and material handling.

**BLOCK HANDLING TOOLS** include special buckets, forks, breaker tines and clearing racks that accommodate large stone blocks.

**BUCKETS** are designed for many applications:

- **SEVERE DUTY BUCKETS** perform well in shot rock, sandstone and other abrasive materials
- **EXTREME DUTY BUCKETS** work productively in highly abrasive materials, such as high quartzite granite
- **BOTTOM DUMP FRONT SHOVEL BUCKETS** are ideal for high-production quarry work
- **PERFORMANCE SERIES BUCKETS** deliver high productivity and fuel efficiency in stockpiling or load and carry jobs
- **SERRATED EDGE BUCKETS** have self-sharpening edges to improve penetration in low-abrasion environments
- **HEAVY DUTY QUARRY BUCKETS** excel in high-impact and high-abrasion applications
- **ROCK BUCKETS** can be equipped with straight edges for higher breakout force and dump clearance or spade edges for improved penetration

**GROUND ENGAGING TOOLS** include wear iron products, Mechanically Attached Wear Plates, heel shrouds and the K Series™ Tip System. They work together to optimize machine performance, reduce operating costs and protect more expensive components.









# CAT DEALER SUPPORT

## Focused on your success

Cat dealers are driven to make customers more successful. They provide products and services to aggregates producers everywhere and can work closely with you to help identify ways to increase productivity and reduce cost per ton.

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### **MORE EQUIPMENT OPTIONS AT MORE PRICE POINTS**

Choose from a selection of new, used, rental and Cat Certified Rebuild equipment options, priced to accommodate a range of capital budgets.

### **FINANCING & INSURANCE**

Work with Cat Financial and get financial products and services from a lender who understands your business.

### **NEW, REBUILT OR CAT REMAN PARTS**

Get the parts you need when and where you need them. Choose new, rebuilt or Cat Reman products and get back to work fast.

### **REPAIR OPTIONS**

Cut repair costs and downtime with certified repairs, rebuilds and component exchange.

### **EQUIPMENT MANAGEMENT**

Let our equipment management experts help you predict and prevent failure, extend component life, reduce service costs and maximize uptime.

### **CUSTOMER SUPPORT AGREEMENTS**

Talk to us about a planned maintenance and support agreement that will keep your system running productively and economically over its entire life cycle.

### **OPERATOR TRAINING**

Improve operator safety and productivity with training options that range from instructor-led sessions in classrooms or in the iron to sophisticated simulators and online learning.









# SUSTAINING SUCCESS FOR GENERATIONS TO COME

## Safe, efficient and responsible

Worldwide demand for aggregates products is on the rise, opening up new opportunities for sales and profit growth. But it also means you must make balanced business decisions based not only on economic factors, but also on social and environmental impact. We understand the pressures you face and are committed to supporting your success with products and services that will help you work safely, grow profitably and sustain your business for today—and generations to come.

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### **SAFETY FOCUS**

Our quarry and aggregates products incorporate advanced safety features like wide stairways, well-placed grab irons and integrated cameras. In addition, we gather and share a variety of educational tools and resources at [safety.cat.com](https://safety.cat.com).

### **ERGONOMIC CABS**

Operators work comfortably and productively in our cabs thanks to features like industry-leading visibility; supportive, adjustable seats; low-effort controls; easy-to-read in-cab displays; and low sound, dust and vibration levels.

### **ENGINE EMISSIONS & FUEL EFFICIENCY**

Cat engines are designed to deliver reliable performance, excellent fuel efficiency and long life while meeting the various emissions standards enacted by regulatory bodies in areas where we do business.

### **SECOND-LIFE OPTIONS**

Most Cat components can be rebuilt or remanufactured for a second life. Our extensive line of Cat Reman products lets you enjoy the performance and quality of new parts at a fraction of the cost. Many of our machines can also be returned to like-new condition with a Cat Certified Rebuild, reducing your costs while conserving natural resources.





LEARN MORE ABOUT CAT QUARRY  
& AGGREGATES SYSTEMS

[Cat.com](http://Cat.com)  
[CatAllDay.com](http://CatAllDay.com)  
[safety.cat.com](http://safety.cat.com)  
[mining.cat.com](http://mining.cat.com)



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