

428

BACKHOE LOADER



Engine Power
Operating Weight
Dig Depth
Loader Breakout Force
Controls

55.4 kW, 70 kW or 74.4 kW
8270 kg (55 kw Engine) or 8345 kg (70 kW Engine)
4778 mm/5700 mm (E-Stick)
54.8 kN
Mechanical Loader
Mechanical Hoe (Pilot Hoe Optional)



NEW MACHINES, ORIGINAL DNA

The first Cat® backhoe loader hit the road in 1985. The machine was co-developed by a team of designers in Illinois, U.S. and a manufacturing team in Desford, UK. The machines are still designed by experts to meet the needs of today's operators. Every model provides reliability, power and a top-quality operator environment to see you through the toughest projects. The latest backhoe loader range is crafted from 35 years of passion, expertise and experience.

THE NEW CAT® 428

TAKE CONTROL IN YOUR NEW BACKHOE LOADER



MORE CONTROL FOR YOU

- + **SAVE FUEL** – SAVE UP TO 10% IN FUEL WITH THE NEW CAT C3.6 ENGINE, WHICH IS DESIGNED TO MEET THE LATEST EMISSIONS STANDARDS.
- + **PILOT CONTROLS** – OPERATE IN COMFORT WITH THE OPTIONAL PILOT HOE CONTROLS GIVING MORE COMFORT AND CONTROL THAN EVER BEFORE.
- + **CHOOSE YOUR SETTINGS** – USE THE DISPLAY SCREEN TO SET YOUR PERSONAL OPERATOR PREFERENCES, SO YOU CAN WORK AT A PACE THAT SUITS YOU, EVERY TIME.
- + **EASY TO OWN AND OPERATE** – WITH MONTHLY PAYMENT OPTIONS, FUEL SAVINGS AND BEST-QUALITY PARTS AND ENGINEERING, IT'S EASIER AND MORE AFFORDABLE THAN EVER TO OWN AND OPERATE A CAT BACKHOE LOADER.

POWERFUL LOAD SENSING

HYDRAULIC SYSTEM



FLOW-SHARING VALVES

Actively manage the flow of oil between each function of the machine. When the operator demands multiple operations the machine responds, providing smooth, effortless operation.

MORE LIFTING PERFORMANCE

The option of a larger boom cylinder is available on the 428 giving increased lifting performance against the standard boom cylinder. This option is available with either mechanical or pilot controls.

VARIABLE DISPLACEMENT PISTON PUMP

A high capacity variable displacement piston pump allows for perfect matching of power and operator demand, providing power when it is needed whilst contributing to great fuel economy.



BACKHOE

BUILT FOR THE TASK

HIGH-ROTATION LINKAGE

The Cat backhoe linkage provides an industry-leading 205 degrees of bucket rotation. This design helps with material retention when truck loading and with vertical wall-trenching. Improved performance and efficiency are achieved by the ability to do more with less movement.

EXCAVATOR-STYLE BOOM

Whether close-up truck loading or digging over obstacles, the iconic excavator-style boom tackles the toughest jobs with ease. Combine this versatility with powerful breakout forces, controllability, a powerful hydraulic system and the 428 is capable of high levels of productivity with minimum effort. The boom is a narrow design, ensuring maximum visibility to the attachment and ground.

CAT CUSHION SWING

The standard Cat Cushion Swing System smooths the backhoe swing function when returning to the trench. Operators will immediately appreciate being able to line up the bucket edge on the trench wall faster and with more control.

SIDE SHIFT FRAME

The Side Shift Frame has exterior lock clamps, with no disassembly needed when servicing. The frame is a solid design with E-Coat protection preventing material build up in the frame, reducing the risk of rust and increasing the life of the frame.

EXTENDIBLE STICK

The extendible stick comes as an option for applications where more versatility is needed. Increasing dig depth and reach capability by 922 mm reduces the amount of machine repositioning and therefore reducing site damage and increasing productivity. A sliding inner section design helps to ensure the wear pads remain as dirt free as possible, prolonging adjustment and replacement intervals. Auxiliary lines, for operating hydraulic attachments, have been routed so that they are protected from damage when working in the narrowest of trenches.

POWERED SIDE SHIFT (OPTIONAL)

Available as an option either from the factory or as a dealer fitted kit, the powered side shift solution provides a hydraulic service to allow the operator to easily position the backhoe across the full width of the Side Shift Frame. Ideal for use in areas with minimal space and utility applications such as gas, electrical, and telecoms.

POWER TRAIN

POWERFUL, PROVEN AND EFFICIENT

C3.6 ENGINE

The Cat C3.6 engine, which meets EU Stage V standards, reduces owning and operating costs while maintaining the same performance and power as the C4.4 engine. The aftertreatment is a compact, maintenance-free solution of DOC, SCR and DPF. The Cat C3.6 engine is a turbocharged in-line four-cylinder, four-stroke cycle with direct injection diesel engine. Cold starting capability down to -25°C comes as standard with a cold starting package option allowing the machine to start down to -47°C . This engine has a 12 volt starting motor with a 750 CCA maintenance-free battery. This engine gives up to 10% fuel savings, based upon application and machine setting, compared to the C4.4 engine.

POWER MANAGEMENT MODES

Three power management modes are available: Eco, Standard and Standard Plus. Depending upon application or performance needs, the operator can select the mode that gives optimum results. Eco mode limits both pump flow and engine speed giving higher fuel saving benefits whereas Standard Plus gives maximum pump flow and engine speed, providing increased power and performance where needed.

TRANSMISSIONS

The 4-speed manual transmission is standard on the 428. A 4-speed powershift transmission is available as an optional upgrade. Improved operator comfort and reduced fatigue is achieved by operation through the Power Shuttle Lever, rather than floor mounted lever, to shift gears. For those operators doing a lot of roading the auto shift transmission with lock-up torque converter is an ideal option as it can give up to 15% fuel efficiency savings on the road whilst maintaining travel speed in hilly environments.

AXLES AND DIFFERENTIAL LOCK

Heavy duty axles and a 100% locking rear differential come as standard on Cat backhoe loaders. The axles provide high durability whilst providing superb traction on uneven surfaces. No daily greasing is required on the front axle helping to save both time and money, keeping owning and operating costs as low as possible. The Diff-lock improves performance by giving maximum traction in all conditions.



LOADER PERFORMANCE

MAKING LIGHT WORK OF LIFTING AND LOADING



PARALLEL LIFT

Parallel lift loader arms offer excellent forward visibility and self-leveling, ensuring excellent material retention throughout the lift and lower cycles.

RIDE CONTROL

This option offers loader suspension to improve operator comfort and productivity. When moving around the job site or transporting the machine on the road, ride control provides extra stability which creates an easier ride for the operator and helps material retention to improve operator efficiency.

RETURN TO DIG

Return to Dig allows the operator to return the bucket to a preset level, this is great for applications with repetitive work cycles especially when working with forks. When not required, for instance when grading with the loader bucket, Return to Dig can be turned off within the display screen.

IT QUICK COUPLER

This option is available from the factory or as a kit, providing the extra versatility needed when working in multiple applications. This coupler allows a quick and safe change between multiple attachments from the inside of the cab.

THE CLASS LEADING OPERATOR ENVIRONMENT JUST GOT BETTER

SET YOUR MACHINE PERFORMANCE TO INCREASE
PRODUCTIVITY AND EFFICIENCY

LCD OPERATOR DISPLAY

The LCD operator display comes standard as a softkey display or can be upgraded to touchscreen. Through the interactive display you can get updates on machine diagnostics and upcoming service intervals, as well as being able to configure various performance parameters dependent on configuration. This helps to match machine performance to operator preference further increasing productivity and efficiency. Optional machine security system is embedded into the display screen helping to keep your Cat backhoe loader secure.



OPERATOR COMFORT

To reduce operator fatigue and increase efficiency, the air suspension seat comes as standard with switches and controls being ergonomically located within reach of the operator. Diff-Lock button, Transmission kickdown and auxiliary controls are all located on the loader control joystick giving power and control at the operator's fingertips. Great visibility allows the operator to get the job done in a safe and efficient manner.



HOE PILOT CONTROLS

Hoe Pilot controls are available as an option on the 428. These are mounted on fully adjustable pods that the operator can position to their preference. These controls increase operator comfort by having them located in the most ergonomic position as well as being easier and smoother to operate than the standard mechanical controls. The loader control will remain mechanical.



ATTACHMENTS

A WIDE RANGE OF CAT ATTACHMENTS ARE AVAILABLE TO MEET THE NEEDS OF YOUR JOB SITE APPLICATIONS.

Our attachments are engineered, balanced and tested to each Cat Backhoe Loader model, promising to minimize stress and optimize performance.

LOADER BUCKETS

General Purpose loader buckets are available as well as the hydraulically operated Multi-Purpose bucket.

OTHER AVAILABLE LOADER TOOLS INCLUDE:

- + BROOMS
- + MATERIAL HANDLING ARMS
- + TRUSS BOOMS
- + FORKS
- + BLADES



EXCAVATING BUCKETS

Cat Attachments provide a range of buckets in various sizes. It is easy to find the correct bucket for the application with a range including:

- + STANDARD DUTY
- + HEAVY DUTY
- + HIGH CAPACITY HD
- + DITCH CLEANING
- + CRIBBING
- + GRADING

OTHER AVAILABLE BACKHOE TOOLS INCLUDE:

- + COLD PLANERS
- + HAMMERS
- + AUGERS
- + VIBRATORY COMPACTION PLATES
- + RIPPER



BACKHOE QUICK COUPLER

Manual or hydraulic backhoe couplers make rear tool exchange quick, easy and safe. Cat dual-lock couplers have a self-adjusting wedge design to ensure a tight fit. They also feature a safety lock which automatically engages.

EASY TO OPERATE

EASY TO MAINTAIN

DAILY SERVICE POINTS

Caterpillar understands that the easier a task is the more likely it is to be done. We have ensured that servicing the Cat backhoe loader is as simple as it can be. All daily check points are grouped together and are easy to access from a large service platform.

HINGED COOLING PACK

The hood opens to reveal the engine and a unique Cat designed hinged cooling pack. The air conditioning pack lifts up and the radiator tilts forward with no tooling required, giving easy access for debris removal whether you are in the workshop or on a job site, keeping optimal cooling performance.

WEAR PAD ADJUSTMENTS

The Extendible Stick (E-Stick) is designed to be self-lubricating, to minimize the need for operator interaction. The stabilizers and E-Stick all have easily adjustable wear pads that require no disassembly. When wear pad adjustments are necessary, the adjustment bolts are easy to access, taking minutes to complete.

CAT FILTERS

All Cat filters are vertically mounted for spill free servicing and reduced oil contamination. These low micron filters remove microscopic particles from the oil, keeping the engine, transmission and hydraulic system running smoothly for years.

A-PIN GREASING

A-Pin grease point has been relocated to give ground level access without needing access to the engine bay, reducing time spent maintaining the machine.

BATTERY/STORAGE BOX

The batteries and battery disconnect switch are conveniently located in the external right hand side lockable storage box for easy access. The box also leaves sufficient space to be able to store grease gun, spanner, etc.





YOUR MACHINE

YOUR SUPPORT

MACHINE SELECTION

Your dealer can help you with your machine purchase decision, based on your requirements and help keep operating costs to a minimum. Is the machine you have in mind exactly the best for your job, or could there be a more suitable solution?

CUSTOMER VALUE AGREEMENTS (CVA'S)

Your Cat dealer can offer a comprehensive range of CVA's which can be individually tailored to suit your requirements. Dealers can offer a range of options from a full preventative maintenance with S·O·SSM package to a parts only CVA. Protect your valuable investment and know exactly what your monthly payments will be to help you run your business.

EQUIPMENT PROTECTION PLAN (EPP)

You count on your Cat machines to get the job done, day in and day out. Choose a protection plan that's just as dependable and long-lasting. EPP offers the only coverage designed specifically for new Cat equipment – giving you the highest level of repair cost protection available. Talk to your dealer today to find out what EPP solution is the best for you!

FINANCE

Have you explored the range of options available from your dealer to finance your machine? They can offer a selection of attractive packages tailored to suit your every requirement.

TRAINING AND SUPPORT

Speak to your dealer about any additional support you may need. They can give you the latest in operating techniques to minimize wear and tear, maximize productivity, lower owning and operating costs and help you make the most of the fantastic features offered on the Cat backhoe loaders.

TECHNICAL SPECIFICATIONS

See *cat.com* for complete specifications.

ENGINE	EU STAGE V (STANDARD)	EU STAGE V (OPTIONAL)	EU STAGE V (OPTIONAL)
Engine	C3.6 55.4 kW Electronic Turbo Intercooled	C3.6 70 kW Electronic Turbo Intercooled	C3.6 74.4 kW Electronic Turbo Intercooled
Ratings at 2,200 rpm			
Gross Power SAE J1995:2014	56 kW/76 hp	71 kW/97 hp	76 kW/103 hp
Engine Power ISO 14396:2002	55 kW/75 hp	70 kW/95 hp	74 kW/101 hp
Net Power Rating @ 2,200 rpm			
SAE J1349:2011	52 kW/70 hp	64 kW/86 hp	68 kW/92 hp
ISO 9249:2007	51 kW/70 hp	63 kW/86 hp	68 kW/92 hp
Torque Rise (net)	86% @ 1,200 rpm	43% @ 1,500 rpm	41% @ 1,500 rpm
Net Torque – SAE J1349	418 N·m	395 N·m	436 N·m
Bore	98 mm	98 mm	98 mm
Stroke	120 mm	120 mm	120 mm
Displacement	3.6 L	3.6 L	3.6 L
• Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator. • No derating required up to 3048 m altitude. Auto derate protects hydraulic and transmission systems. • Meets EU Stage V emission standards.			

TRANSMISSION	POWER SHUTTLE TRANSMISSION (STANDARD)	POWERSHIFT TRANSMISSION (OPTIONAL)	AUTO-SHIFT TRANSMISSION WITH LOCK-UP TORQUE CONVERTER (OPTIONAL)
Travel speeds of backhoe loader at full throttle, when equipped with 480/80-26 rear tires.			
Forward			
1st	6 km/h	6 km/h	6 km/h
2nd	9 km/h	10 km/h	10 km/h
3rd	21 km/h	20 km/h	12 km/h
4th	40 km/h	40 km/h	20 km/h
5th	—	—	27 km/h
6th	—	—	40 km/h
Reverse			
1st	6 km/h	6 km/h	6 km/h
2nd	9 km/h	12 km/h	12 km/h
3rd	21 km/h	27 km/h	27 km/h
4th	40 km/h	—	—

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

AXLE RATINGS	
Front Axle, AWD	
Static	23 500 kg
Dynamic	9000 kg
Rear Axle	
Static	26 500 kg
Dynamic	10 000 kg

WEIGHTS*	
Operating Weight (estimated) (55 kW)*	8270 kg
Operating Weight (estimated) (70 kW)*	8345 kg
Operating Weight (maximum) (ROPS capacity)	11 000 kg
Cab, ROPS/FOPS	Standard
Auto-Shift Transmission	96 kg
Ride Control	15 kg
Air Conditioning	45 kg
MP Bucket (1.03 m³)	
with Fold-over Forks	860 kg
without Fold-over Forks	674 kg
Loader QC	185 kg
Extendible Stick	208 kg
Counterweights	
Base	115 kg
Stackable, One	250 kg
Maximum	485 kg
Minimum Counterweight Recommendations – Standard Stick	
Loader Bucket	
GP	115 kg
MP	0 kg
Minimum Counterweight Recommendations – Extendible Stick	
Loader Bucket	
GP	460 kg
MP	0 kg
Total Gross Weight Not to Exceed	11 000 kg
*Machine Configuration – 70 kW HRC engine; standard stick hoe; standard cab with A/C; AWD standard shift transmission; 1.03 m³ MP loader bucket; 600 mm standard duty hoe bucket; 340/80-20 and 480/80-26 tires; no counterweight; One Way Aux Lines; AWD Guard; Front Fenders; HD Battery; 80 kg operator; full fuel tank.	

HYDRAULIC SYSTEM	
Type	Closed Center
Pump Type	Variable-Flow, Axial Piston
Pump Capacity @ 2,200 rpm	160 L/min
System Pressure	
Backhoe	250 bar
Loader	250 bar

STEERING	
Type	Front Wheel
Power Steering	Hydrostatic
AWD Cylinder, One (1) Double-acting	
Bore	65 mm
Stroke	106 mm
Rod Diameter	40 mm
Turning Circle	
AWD (inner wheel not braked)	
Outside Front Wheels	9,273 mm
Outside Widest Loader Bucket	11,622 mm

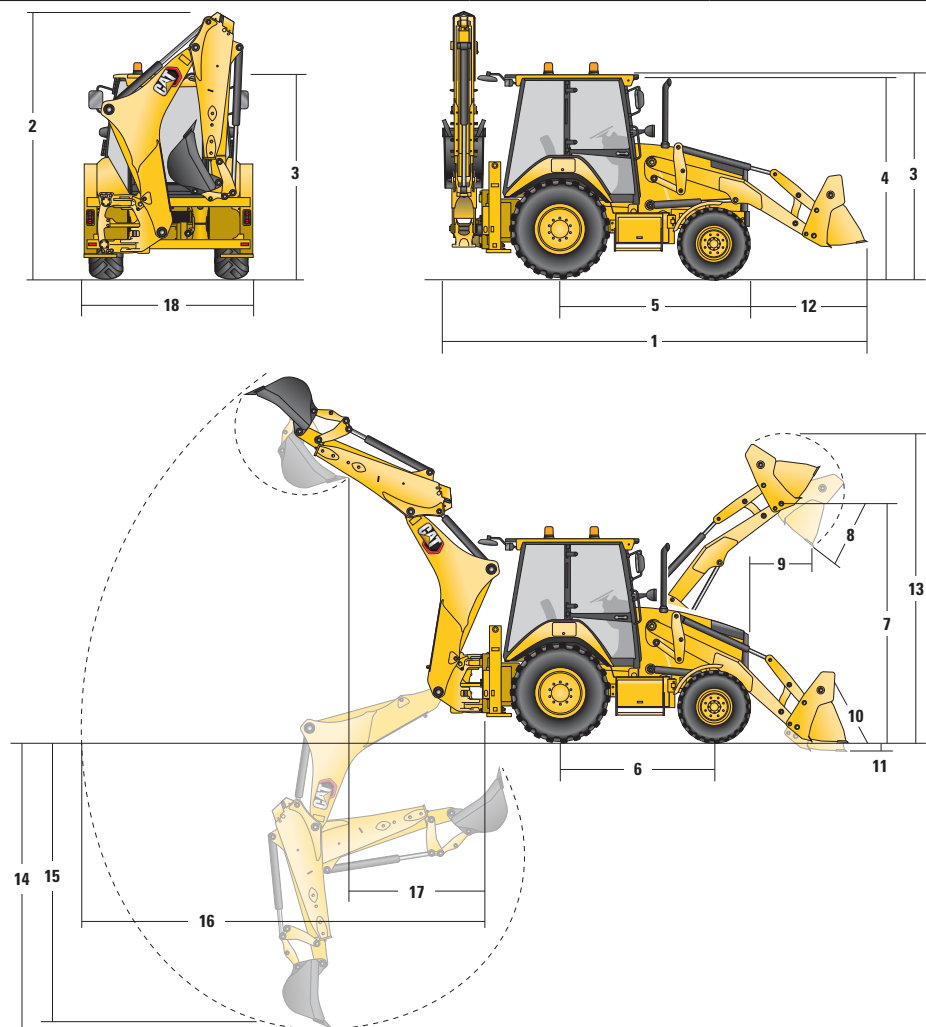
SERVICE REFILL CAPACITIES	
Cooling System with A/C	18 L
Fuel Tank	160 L
Engine Oil with Filter	9 L
Diesel Exhaust Fluid	19 L
Transmission (Power Shuttle)	18 L
Transmission (Powershift/Autoshift)	19 L
Rear Axle	
Planetaries	1.7 L
Front Axle	
Planetaries	0.7 L
Hydraulic System	95 L
Hydraulic Tank	42 L

(continued on next page)

TECHNICAL SPECIFICATIONS

See *cat.com* for complete specifications.

MACHINE DIMENSIONS



	Parallel Lift Loader		
	GP – 1.0 m ³	MP – 1.03 m ³	MP with Forks – 1.03 m ³
1 Overall Length in Rooding Position	5747 mm	5728 mm	5728 mm
Overall Transportation Length	5754 mm	5711 mm	5711 mm
2 Overall Transportation Height	3786 mm	3786 mm	3786 mm
Overall Width	2352 mm	2352 mm	2352 mm
3 Height to Top of Cab/Canopy	2835 mm	2835 mm	2835 mm
4 Height to Top of Exhaust Stack	2731 mm	2731 mm	2731 mm
5 Rear Axle Centerline to Front Grill	2705 mm	2705 mm	2705 mm
6 Wheelbase	2200 mm	2200 mm	2200 mm

Dimensions and performance specifications shown are for machines equipped with 340/80-20 front tires, 480/80-26 rear tires, Std Cab, E-Stick, 610 mm standard duty bucket, and 1.03 m³ MP loader bucket and standard equipment unless otherwise specified.

TECHNICAL SPECIFICATIONS

See *cat.com* for complete specifications.

LOADER BUCKET DIMENSIONS AND PERFORMANCE

	Parallel Lift Loader		
	GP – 1.0 m³	MP – 1.03 m³	MP with Forks – 1.03 m³
Capacity (SAE rated)	1.0 m³	1.03 m³	1.03 m³
Width	2406 mm	2406 mm	2406 mm
Lift Capacity at Maximum Height	3765 kg	3525 kg	3340 kg
Lift Breakout Force	54 658 N	53 161 N	51 449 N
Tilt Breakout Force	54 211 N	59 763 N	58 818 N
Tipping Load at Breakout Point	6769 kg	6750 kg	6595 kg
7 Maximum Hinge Pin Height	3492 mm	3492 mm	3492 mm
8 Dump Angle at Full Height	45°	45°	45°
Dump Height at Maximum Angle	2789 mm	2813 mm	2813 mm
9 Dump Reach at Maximum Angle	805 mm	732 mm	732 mm
10 Maximum Bucket Rollback at Ground Level	38°	38°	38°
11 Digging Depth	67 mm	101 mm	101 mm
Maximum Grading Angle	114°	116°	116°
12 Grill to Bucket Cutting Edge, Carry Position	1474 mm	1457 mm	1457 mm
13 Maximum Operating Height	4358 mm	4395 mm	4395 mm
Weight (does not include teeth)	438 kg	674 kg	860 kg

BACKHOE DIMENSIONS AND PERFORMANCE

	Standard Stick – 4.3 m	E-Stick Retracted – 4.3 m	E-Stick Extended – 4.3 m
14 Digging Depth, SAE Maximum	4297 mm	4300 mm	5290 mm
Digging Depth, Manufacturer's Maximum	4778 mm	4764 mm	5682 mm
15 Digging Depth, 2400 mm Flat Bottom	3914 mm	3918 mm	4985 mm
Digging Depth, 600 mm Flat Bottom	4254 mm	4257 mm	5251 mm
Digging Depth, 600 mm Flat Bottom, Manufacturer's	4734 mm	4739 mm	5682 mm
Reach from Rear Axle Centerline at Ground Line	6740 mm	6746 mm	7672 mm
16 Reach from Swing Pivot at Ground Line	5650 mm	5656 mm	6582 mm
Maximum Operating Height	5664 mm	5664 mm	6260 mm
Loading Height	3990 mm	3999 mm	4595 mm
17 Loading Reach	1702 mm	1650 mm	2515 mm
Swing Arc	180°	180°	180°
Bucket Rotation	205°	205°	205°
18 Stabilizer Overall Width	2352 mm	2352 mm	2352 mm
Bucket Dig Force	63 445 N	63 417 N	63 417 N
Stick Dig Force	36 225 N	36 891 N	26 967 N

STANDARD & OPTIONAL EQUIPMENT

Standard and optional equipment may vary. Consult your Cat dealer for details.

CAB ROPS AND FOPS	STANDARD	OPTIONAL
Cab, Standard	•	
Cab, Deluxe		•
TIRES/STEERING/BRAKES	STANDARD	OPTIONAL
All Wheel Drive	•	
100% Differential Lock	•	
Hydraulic Boosted Brakes	•	
Tires 26 inch	•	
Tires 28 inch		•
ENGINE/TRANSMISSION	STANDARD	OPTIONAL
Engine, C3.6 55.4 kW	•	
Engine, C3.6 70 kW		•
Engine, C3.6 74.4 kW		•
Battery, 750 CCA, Standard	•	
Battery, 750 CCA, Heavy Duty		•
Hinged Radiator Pack	•	
Auto Idle		•
Eco Mode		•
Standard Mode	•	
Standard + Mode		•
Engine Block Heater		•
Transmission Neutralizer	•	
Transmission, Four Speed Manual	•	
Transmission, Four Speed Powershift (not on 55 kW engine)		•
Transmission, Six Speed Automatic (not on 55 kW Engine)		•
Transmission, Six Speed with Lock-Up Torque Converter (not on 55 kW engine)		•
CONTROLS	STANDARD	OPTIONAL
Controls, Mechanical Levers	•	
Controls, Pilot Hoe Joysticks		•
Pattern Selector (ISO/SAE)		•
Power Steering, Hydrostatic	•	
ELECTRICAL	STANDARD	OPTIONAL
Display Screen, Soft Key	•	
Display Screen, Touchscreen		•
Product Link Cellular	•	
Product Link Satellite		•
Reversing Alarm	•	
Stabilizer Alarm	•	
Beacon, Rotating		•
Beacon, Strobe		•
HYDRAULICS	STANDARD	OPTIONAL
Variable Displacement Piston Pump	•	
Hydraulic Quick Disconnects		•
Side Shift Lock	•	
Hydraulic Oil Cooler	•	
Hydraulic Lines, One Way		•
Hydraulic Lines, Two Way		•
Loader Kickout, Float	•	
Loader Kickout, Return to Dig	•	
Powered Side Shift		•
Ride Control		•
Continuous Flow		•
Programmable Auxiliary Flow		•
BOOMS, STICKS AND LINKAGES	STANDARD	OPTIONAL
Stick Standard, 4.3 m	•	
Stick Extending, 4.3 m		•
Hoe Quick Coupler, Mechanical		•
Hoe Quick Coupler, Hydraulic		•
Loader Quick Coupler, Hydraulic		•
Transport Lock, Swing	•	
Transport Lock, Boom	•	
OTHER ATTACHMENTS	STANDARD	OPTIONAL
Counterweight, 115 kg		•
Counterweight, 240 kg		•
Counterweight, 460 kg		•
Front Fenders		•
Street Pads, Stabilizers		•
External Tool Box	•	
Transport Tie Downs	•	

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.

For additional information, refer to the Technical Specifications brochure available at www.cat.com or your Cat dealer.

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

AEHQ8336
(Europe)

© 2021 Caterpillar. All Rights Reserved.

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

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.
www.cat.com www.caterpillar.com

