# 316F L Hydraulic Excavator





Engine	
Engine Model Cat®	C4.4 ACERTTM
Net Power – SAE J1349/ISO 9249 88 k\	W (120 PS)
Gross Power – SAE J1995 91 k\	W (124 PS)
Engine Power – ISO 14396 91 kV	W (124 PS)

Drive	
Maximum Travel Speed	5.3 km/h
Maximum Drawbar Pull	156 kN
Weight	
Minimum Operating Weight	17 200 kg
Maximum Operating Weight	18 500 kg

#### Introduction

The new Cat 316F L is a perfect choice for customers who value reliable, economical performance. Powered by a fuel-efficient U.S. EPA Tier 4 Final and EU Stage IV emission standards C4.4 ACERT engine, the machine features a state-of-the-art hydraulic system that enables you to move material all day long with tremendous speed and precision.

When you add in a quiet operator environment that keeps you comfortable and productive, robust structures that keep you grounded and balanced, easy-to-reach service points that make your routine maintenance fast and simple, and multiple Cat work tools that help you take on a variety of tasks, you just won't find a better, more efficient excavator in its size class — any place, anywhere.

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# **Hydraulics**

Power to move your material with speed and precision



#### A Powerful, Efficient Design

When it comes to moving material quickly and efficiently, you need hydraulic horsepower – the type of ground-breaking power the 316F L can deliver. Major hydraulic components like pumps and valves are located close together so shorter tubes and lines can be used. This design leads to less friction loss, reduced pressure drops, and more power to the ground for the work you need to get done.

#### **Control Like No Other**

Controllability is one of the main attributes of Cat excavators, and one of the key contributors to this is the main control valve. The valve opens slowly when your range of joystick lever movement is small and opens rapidly when movement is high. It puts flow where you need it when you need it, which leads to smoother operation, greater efficiency, and lower fuel consumption.

#### **Auxiliary Hydraulics For Added Versatility**

Auxiliary hydraulics give you greater tool versatility so you can take on more work with just one machine, and there are several options from which you can choose. A quick coupler circuit, for example, will allow you to switch from one tool to another in a matter of minutes – all from the comfort and convenience of the cab.

#### **Boom & Stick Oil Recirculation For Added Efficiency**

The 316F L recirculates the flow of oil from the head end of the boom and stick cylinders to the rod end of the boom and stick cylinders during the work cycle to save energy and improve fuel efficiency. It's optimized for any dial speed setting you select, which results in less pressure loss for higher controllability, more productivity, and lower operating costs for you.

# **Engine**

# Powerful and fuel efficient to meet your expectations



#### **Proven Technology**

The Cat C4.4 ACERT engine meets Tier 4 Final and Stage IV emission standards, and it does so without interrupting your job process. Simply turn the engine on and go to work. It will look for opportunities in your work cycle to regenerate itself, and it will give you plenty of power for the task at hand — all to help keep your owning and operating costs to an absolute minimum.

Like every Cat Tier 4 Final and Stage IV emission compliance engine, the C4.4 ACERT engine is equipped with a combination of proven electronic, fuel, air, and aftertreatment components. Applying these time-tested technologies lets us meet your high expectations for productivity, fuel efficiency, reliability, and service life.

Following are the results you can expect:

- Improved fluid efficiency of up to 5% over Tier 4 Interim/ Stage IIIB products, including Diesel Exhaust Fluid (DEF) consumption.
- High performance across a variety of applications.
- Enhanced reliability through commonality and simplicity of design.
- Maximized uptime and reduced cost with world-class Cat dealer support.
- **Minimized impact** on emission systems with no operator interaction required.
- Durability with long service life.
- Better fuel economy with minimized maintenance costs.
- Same great power and response.

# **Operator Station**

Comfort and convenience to keep you productive

#### **Comfortable Seat Options**

The seat range includes air suspension, heated, and air cooled options. All seats include a reclining back, upper and lower slide adjustments, and height and tilt angle adjustments to meet your needs for maximum comfort.



The ROPS cab provides you with a safe working environment when properly seated and belted. It also contributes to your comfort because it's attached to a reinforced frame with special viscous mounts that limit vibration and unnecessary sound. Add in special roof lining and sealing and you have a cab that's as quiet inside as today's top pickup trucks.

#### A Cool & Warm Environment

The automatic climate control system features multiple air outlets with filtered ventilation. Air flows on the floor, behind the seat, and in front of you to make your work in either hot or cold weather much more pleasant and productive.

#### **Controls Just For You**

The right and left joystick consoles can be adjusted to improve your comfort and productivity during the course of a day.

Also, the right joystick features a button that will reduce engine speed when you are not working to help save fuel. Touch it once and speed reduces; touch it again and speed increases for normal operation.



The LCD monitor is easy to see and navigate. Programmable in up to 42 languages to meet today's diverse workforce, the monitor clearly displays critical information you need to operate efficiently and effectively. Plus it projects the image from the standard rearview camera to help you see what's going on around you so you can stay safely focused on the job at hand.

#### **Ample Storage & Auxiliary Power**

Storage spaces are located in the front, rear, and side consoles of the cab. A drink holder accommodates a large mug, and a shelf behind the seat stores large lunch or toolboxes. Two 12-volt power supply sockets are conveniently located near the key storage areas for charging your electronic devices like an MP3 player, a cell phone, or a tablet.



#### **Robust Frame**

The 316F L is a well-built machine designed to give you a very long service life. The upper frame has mountings made specifically to support the heavy-duty cab; it is also reinforced around key areas that take on stress like the boom foot and skirt. Massive bolts are used to attach the track frames to the body, and additional bolts are used to increase the machine's digging force, which leads to more productivity for you.



The 316F long undercarriage contributes significantly to its outstanding stability and durability. Track shoes, links, rollers, idlers, and final drives are all built with long-lasting, high-tensile-strength steel. Cat Grease Lubricated Track 2 (GLT2) track link protects moving parts by keeping water, debris, and dust out and grease sealed in, which delivers longer wear life and reduced noise when traveling. Optional guide guards help maintain track alignment to improve the machine's overall performance — whether you're traveling on a flat, heavy bed of rock or a steep, wet field of mud.



# **Integrated Technologies**

Monitor, manage, and enhance job site operations



Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



**Equipment Management** – increase uptime and reduce operating costs.



**Productivity** – monitor production and manage job site efficiency.



**Safety** – enhance job site awareness to keep your people and equipment safe.

#### **LINK Technologies**

LINK technologies, like Product Link<sup>TM</sup>, are deeply integrated into your machine and wirelessly communicates key information, including location, hours, fuel usage, idle time and event codes.

#### **Product Link/VisionLink®**

Easy access to Product Link data via the online VisionLink user interface can help you see how your machine or fleet is performing. You can use this information to make timely, fact based decisions that can boost job site efficiency and productivity, and lower costs.

#### **GRADE Technologies**

Grade technologies combine digital design data and in-cab guidance to help you reach target grade quickly and accurately, with minimal staking and checking. That means you'll be more productive, complete jobs faster, in fewer passes, using less fuel, at a lower cost.





#### Cat Grade Control Depth and Slope

The factory integrated Cat Grade Control system delivers 2D bucket tip elevation guidance to the cab to help operators create precise planes and slopes with ease. Real-time bucket tip elevation guidance on the easy-to-read standard cab monitor indicates how much to cut or fill. Fast response sensors deliver immediate feedback, while optional integrated joystick buttons help operators make quick adjustments to maintain consistent, quality grades. Built-in alerts can be set to warn the operator if the linkage or bucket approaches a predefined elevation or depth, such as when working in areas with low ceilings, or digging near water lines. Staking and checking is minimized, which reduces ground crews and enhances job site safety.

Works best in simple 2D applications, such as digging basements or grading steep embankments. Easily upgrade to AccuGrade™ when 3D guidance is required.

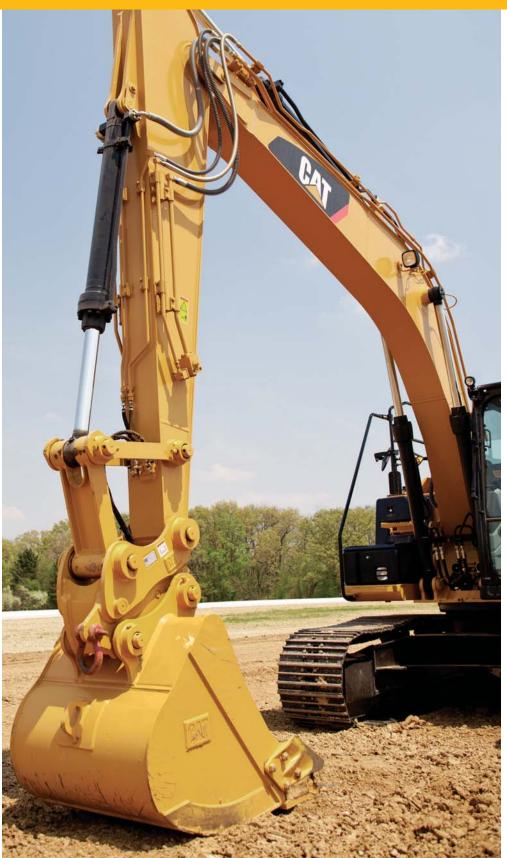
#### Cat AccuGrade

The dealer-installed AccuGrade system provides 3D guidance for making complex cuts and contours, eliminating the need for staking and checking. A dedicated monitor displays a digital design plan with 3D bucket tip positioning and elevation guidance, indicating precisely where to work and how much to cut or fill.

Plug and play capability on the 336F simplifies upgrading. Choose from satellite (GNSS) control for large projects with complex designs or total station (UTS) systems in areas with limited reception.

# **Front Linkage**

Options to take on your far-reaching and up-close tasks



#### **Designed For Range**

The 316F L is offered with a reach boom and four stick configurations: R3.1 m, R2.9 m, R2.6 m and R2.25 m. Reach configurations balance digging force and bucket capacity, covering all applications this size of machine was designed to take on such as trenching, loading, and doing demolition work with hydraulic tools.

In Europe, we also offered Variable
Angle boom configuration with
two stick options: R2.6 m and R2.25 m.
Variable Angle Boom offers superb
flexibility and versatility in the working
envelope. Boom position can be adjusted
from 90° when fully retracted to 180°
and fully extended. With full extension,
the working range gives maximum dig
depth, reach, and working height.
Equally, when retracted, it can work
closer to its tracks, increase lifting
capacity, and work in confined areas.

#### Made To Last

Each boom and stick is built with internal baffle plates for maximum durability, and each undergoes ultrasound inspection to ensure quality and reliability for the tough work you do.

Talk to your Cat dealer to pick the best front linkage for your specific applications.

# **Attachments**

# Tools to make you productive and profitable



#### **Change Jobs Quickly**

Cat quick coupler brings the ability to quickly change attachments and switch from job to job.

#### Dig, Finish, or Break

A range of buckets dig everything from top soil to abrasive material. For finishing and grading work, compact and shallow ditch cleaning buckets fit the need.

A hydraulic hammer equips the machine for breaking sidewalks, driveways, and pavement.



Your Cat dealer can install hydraulic kits to properly operate all Cat Work Tool attachments — maximizing the machine's uptime and your profits. All Cat Work Tool attachments are supported by the same Cat dealer network as your Cat machine.







# **Serviceability**

# Designed to make your maintenance quick and easy

#### **Safe, Convenient Access**

You can reach most routine maintenance items like fluid taps and grease points from the safety and convenience of ground level. You will also find filters banked together for higher service efficiency. Compartments feature wide service doors designed to help prevent debris entry, and they also securely latch in place to help make your service work simpler.

#### **A Smart Design**

The high-ambient cooling system features a fuel-saving variable-speed fan and a side-by-side-mounted radiator and oil and air coolers for easy cleaning. Wider clearance between the two makes blowing off debris easy for you, which can help improve your machine's reliability and performance.

#### A Fresh Idea

When you select ventilation inside the cab, outside air enters through the fresh air filter. The filter is conveniently located on the side of the cab to make it easy to reach and replace, and it is protected by a lockable door that can be opened with the engine key.

#### **More Service Benefits**

Filters are banked together to enhance service efficiency. The fuel tank's drain tube makes it easy and simple for you to remove water and sediment during routine maintenance. Plus an integrated fuel level indicator pops up to help you reduce the possibility of fuel tank overfilling.





# **Safety**

### Features to help protect you day in and day out







#### A Safe, Quiet Cab

The ROPS cab provides you with a safe working environment when properly seated and belted. It also contributes to your comfort because it's attached to a reinforced frame with special viscous mounts that limit vibration and unnecessary sound. Add in special roof lining and sealing and you have a cab that's as quiet inside as any of today's top pickup trucks.

#### **Secure Contact Points**

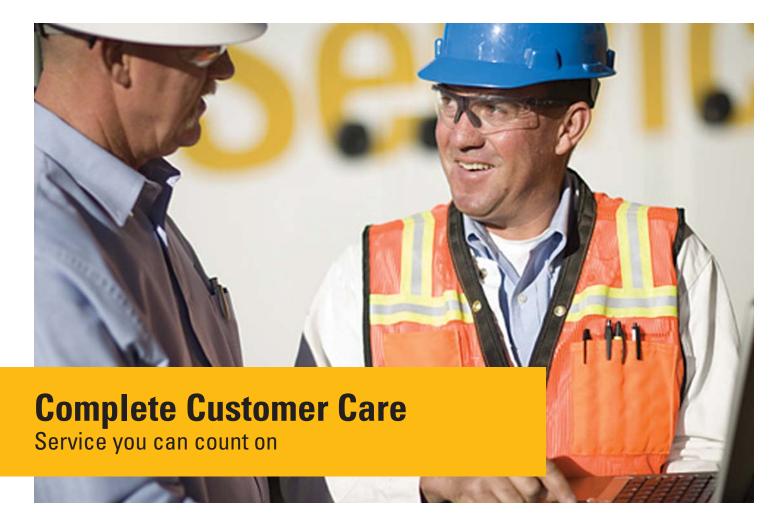
Multiple large steps get you into the cab as well as a leg up to the compartments. Extended hand and guard rails allow you to safely climb to the upper deck. Anti-skid plates reduce your slipping hazards in all types of weather conditions, and they can be removed for cleaning.

#### **Great Views**

Ample glass gives you excellent visibility out front and to the side, and the standard rearview camera gives you a clear field of view behind the machine through the cab monitor. The available split-configuration windshield features an upper window with handles that make it easy to slide and store above you and a lower window that can be removed and stored on the inside wall of the cab. The large skylight also serves as an emergency exit and provides you with enhanced overhead visibility.

#### **Smart Lighting**

Halogen lights provide plenty of illumination, and the cab and boom lights can be programmed to stay on for up to 90 seconds after the engine has been turned off to help you safely exit the machine.



#### **Parts Where You Work**

Cat dealers utilize a worldwide parts network to maximize your machines' uptime. Plus they can help you save money with Cat remanufactured components.

#### **Advice You Can Trust**

What are the job requirements and machine attachments? What production is needed? Your Cat dealer can provide recommendations to help you make the right machine choices.

#### **Financial Options Just For You**

Consider financing options and day-to-day operating costs. Look at dealer services that can be included in the machine's cost to yield lower owning and operating costs over time.

#### **Support Agreements To Fit Your Needs**

Cat dealers offer a variety of customer support agreements and work with you to develop a plan to meet your specific needs.

These plans can cover the entire machine, including attachments, to help protect your investment.

#### **Operating Techniques To Boost Your Profits**

Improving operating techniques can boost your profits. Your Cat dealer has videos, literature, and other ideas to help you increase productivity. Caterpillar also offers simulators and certified operator training to help maximize the return on your investment.



# **Sustainability**

Generations ahead in every way

- The C4.4 ACERT engine meets Tier 4 Final and Stage IV emission standards.
- The engine can run on either ultra-low-sulfur diesel (ULSD) fuel with 15 ppm (10 ppm level in EU standards) of sulfur or less or biodiesel (up to B20) fuel blended with ULSD that meets ASTM 6751 standards.
- An overfill indicator rises when the fuel tank is full to help service technicians avoid spilling.
- The QuickEvac<sup>™</sup> option ensures fast, easy, and secure changing of engine and hydraulic oil.
- The machine is built to be rebuilt with major structures and components capable of being remanufactured to reduce waste and replacement costs.
- An efficient engine oil filter eliminates the need for painted metal cans and aluminum top plates. The cartridge-style spin-on housing enables the internal filter to be separated and replaced; the used internal element can be incinerated to help reduce waste.
- The 316F L is an efficient, productive machine that's designed to conserve our natural resources for generations ahead.

Engine	
Engine Model	Cat C4.4 ACERT
Gross Power – SAE J1995	91 kW (124 PS)
Engine Power – ISO 14396	91 kW (124 PS)
Net Power – SAE J1349/ISO 9249	88 kW (120 PS)
Bore	105 mm
Stroke	127 mm
Displacement	4.4 L

Weights	
Minimum Operating Weight*	17 200 kg
Maximum Operating Weight**	18 500 kg

<sup>\*5.1</sup> m boom, 2.25 m stick, 2.8 mt counterweight, 0.76 m³ GD bucket, and 500 mm.

<sup>\*\*</sup>Variable Angle Boom, R2.6 stick, 2.8 mt counterweight, 0.76 m³ GD bucket, 700 mm shoes.

Hydraulic System	
Main System – Maximum Flow (Total)	300 L/min
Maximum Pressure – Equipment	35 000 kPa
Maximum Pressure – Travel	35 000 kPa
Maximum Pressure – Swing	25 000 kPa
Pilot System – Maximum Flow	25 L/min
Pilot System – Maximum Pressure	4120 kPa
Boom Cylinder – Bore	110 mm
Boom Cylinder – Stroke	1193 mm
Stick Cylinder – Bore	120 mm
Stick Cylinder – Stroke	1331 mm
Bucket Cylinder – Bore	110 mm
Bucket Cylinder – Stroke	1039 mm

Drive		
Gradeability	30°/70%	
Maximum Travel Speed	5.3 km/h	
Maximum Drawbar Pull	156 kN	_

Swing Mechanism	
Swing Speed	8.9 rpm
Swing Torque	49.6 kN·m
Service Refill Capacities	
Fuel Tank Capacity	290 L
Cooling System	26 L
Engine Oil (with filter)	13.5 L
Swing Drive	8 L
Final Drive (each)	8 L
Hydraulic System (including tank)	121 L
Hydraulic Tank	106 L
DEF Tank Capacity	20.5 L

Track	
Number of Shoes (each side)	44 pieces
Number of Track Rollers (each side)	7 pieces
Number of Carrier Rollers (each side)	2 pieces

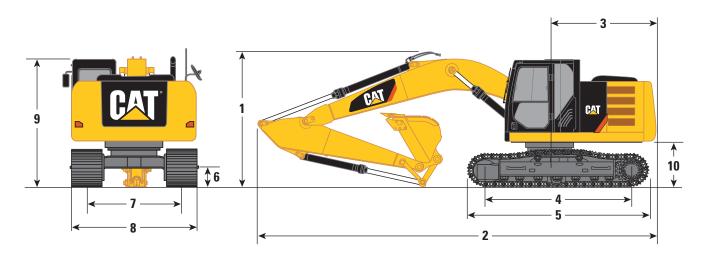
Sound Performance		
Operator Sound Pressure Level (ISO 6396:2008)	71 dB(A)	
Exterior Sound Power Level (ISO 6395:2008)*	102 dB(A)	

- \* European Union Directive "2000/14/EC" as amended by "2005/88/EC."
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/ windows open) for extended periods or in noisy environment.

Standards	
Brakes	ISO 10265 2008
ROPS cab	ISO 12117-2 2008
Cab/OPG	ISO 10262 1998

#### **Dimensions**

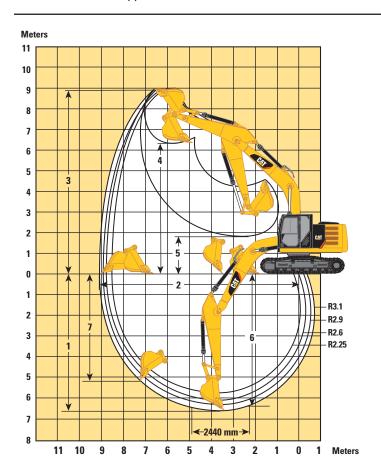
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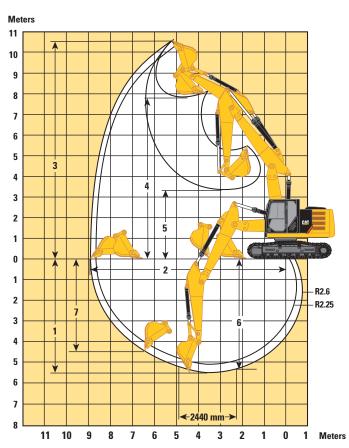


Boom Options	Reach Boom 5.1 m				Variable Angle Boom	
Stick Options	R3.1	R2.9	R2.6	R2.25	R2.6	R2.25
Bucket Type	GD	GD	GD	GD	GD	GD
Bucket Capacity	0.76 m <sup>3</sup>	0.76 m³	0.76 m <sup>3</sup>	0.76 m³	0.76 m³	0.76 m <sup>3</sup>
Tip Radius	1380 mm	1380 mm	1380 mm	1380 mm	1380 mm	1380 mm
1 Shipping Height	3190 mm	3100 mm	3050 mm	3020 mm	2980 mm	2930 mm
2 Shipping Length	8570 mm	8580 mm	8570 mm	8570 mm	8630 mm	8640 mm
3 Tail Swing Radius	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm	2500 mm
4 Length to Center of Rollers	3170 mm	3170 mm	3170 mm	3170 mm	3170 mm	3170 mm
5 Track Length	3970 mm	3970 mm	3970 mm	3970 mm	3970 mm	3970 mm
<b>6</b> Ground Clearance	440 mm	440 mm	440 mm	440 mm	440 mm	440 mm
7 Track Gauge	1990 mm	1990 mm	1990 mm	1990 mm	1990 mm	1990 mm
8 Transport Width						
500 mm Shoe	2520 mm	2520 mm	2520 mm	2520 mm	2520 mm	2520 mm
600 mm Shoes	2590 mm	2590 mm	2590 mm	2590 mm	2590 mm	2590 mm
700 mm Shoes	2690 mm	2690 mm	2690 mm	2690 mm	2690 mm	2690 mm
<b>9</b> Cab Height	2890 mm	2890 mm	2890 mm	2890 mm	2890 mm	2890 mm
Cab Height with Top Guard	3100 mm	3100 mm	3100 mm	3100 mm	3100 mm	3100 mm
<b>10</b> Counterweight Clearance	1010 mm	1010 mm	1010 mm	1010 mm	1010 mm	1010 mm

#### **Working Ranges**

All dimensions are approximate.





		Reach 5.1	Variable Angle Boom			
Stick	R3.1	R2.9	R2.6	R2.25	R2.6	R2.25
Bucket	0.76 m <sup>3</sup>					
Tip Radius	1380 mm					
1 Maximum Digging Depth	6590 mm	6390 mm	6090 mm	5740 mm	5510 mm	5170 mm
2 Maximum Reach at Ground Level	9160 mm	8990 mm	8780 mm	8460 mm	8970 mm	8630 mm
3 Maximum Cutting Height	8970 mm	8880 mm	8920 mm	8740 mm	10 560 mm	10 250 mm
4 Maximum Loading Height	6370 mm	6270 mm	6280 mm	6110 mm	7870 mm	7550 mm
5 Minimum Loading Height	1800 mm	2000 mm	2300 mm	2650 mm	3290 mm	3590 mm
<b>6</b> Maximum Depth Cut for 2440 mm Level Bottom	6400 mm	6160 mm	5870 mm	5500 mm	5390 mm	5030 mm
7 Maximum Vertical Wall Digging Depth	5130 mm	4940 mm	4960 mm	4520 mm	4480 mm	4100 mm

#### **Operating Weight and Ground Pressure**

	700 mm Triple Grouser Shoes		600 mm Triple Grouser Shoes		500 mm Triple Grouser Shoes	
	kg	kPa	kg	kPa	kg	kPa
Reach Boom – 5.1 m						
R3.1 m	17 800	36.2	17 500	36.4	17 300	49.2
R2.9 m	17 800	36.2	17 500	36.4	17 300	49.2
R2.6 m	17 700	36.0	17 400	41.2	17 200	48.9
R2.25 m	17 700	36.0	17 400	41.2	17 200	48.9
Variable Angle Boom						
R2.6 m	18 500	37.6	18 200	43.1	18 000	51.2
R2.25 m	18 500	37.6	18 200	43.1	18 000	51.2

#### **Major Component Weights**

	kg
Base Machine (with boom cylinder without counterweight, front linkage and track)	5820
Long Undercarriage	3770
Counterweight 2.8 mt	2800
Reach Boom – 5.1 m	1300
R3.1 Stick (includes lines, pins and stick cylinder)	890
R2.9 Stick (includes lines, pins and stick cylinder)	860
Variable Angle Boom	2000
R2.6 Stick (includes lines, pins, bucket cylinder and bucket linkage)	800
R2.25 Stick (includes lines, pins, bucket cylinder and bucket linkage)	770
Track Shoe (per two tracks)	
500 mm Triple Grouser	2190
600 mm Triple Grouser	2420
700 mm Triple Grouser	2660
CW dedicated Quick Coupler	220
GD 0.76 m <sup>3</sup> bucket with sidecutter and tip	560

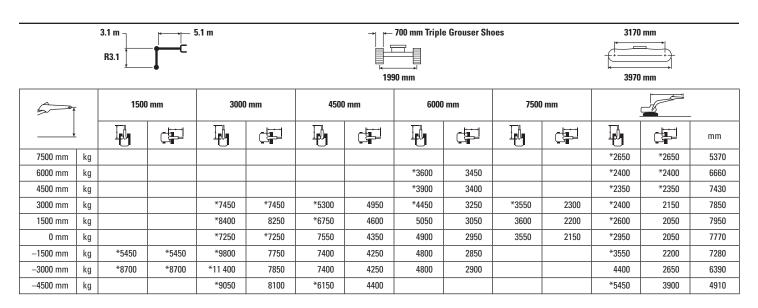
All weights are rounded up to nearest 10 kg except for buckets.

Base machine includes 75 kg operator weight, 90% fuel weight, and undercarriage with center guard.

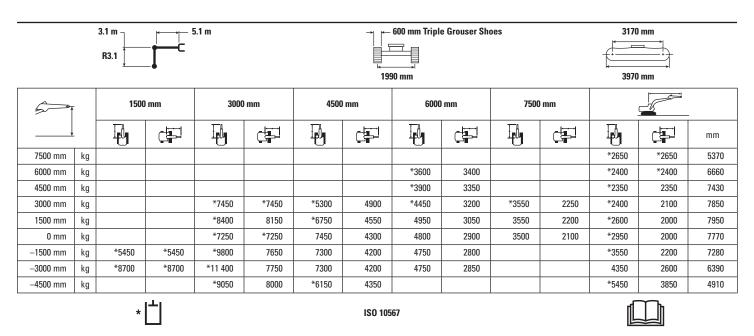
### **Bucket and Stick Forces**

		Reach Boom 5.1 m				
Stick	R3.1	R2.9	R2.6	R2.25	R2.6	R2.25
General Duty						
Bucket Digging Force (SAE)	98 kN	98 kN	98 kN	98 kN	98 kN	98 kN
Bucket Digging Force (ISO)	111 kN	111 kN	111 kN	111 kN	111 kN	111 kN
Stick Digging Force (SAE)	69 kN	73 kN	77 kN	85 kN	77 kN	85 kN
Stick Digging Force (ISO)	71 kN	75 kN	80 kN	88 kN	80 kN	88 kN

#### Reach Boom Lift Capacities - Counterweight: 2.8 mt - without Bucket



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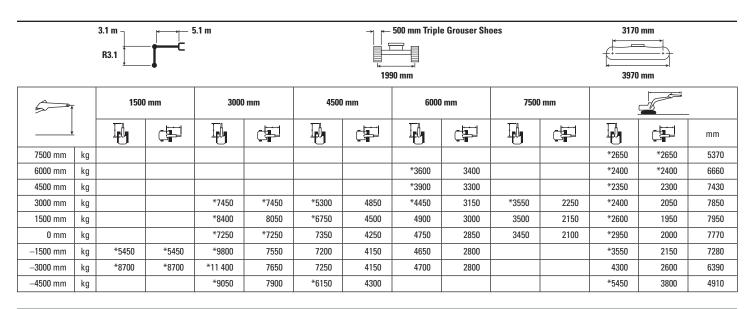


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

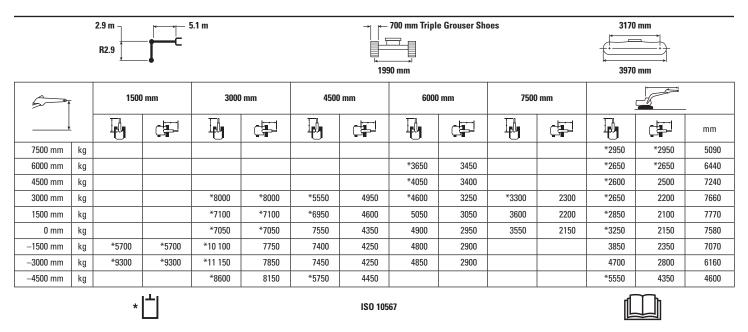
They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

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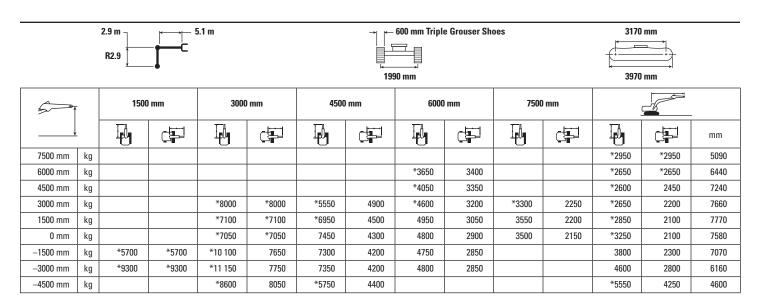


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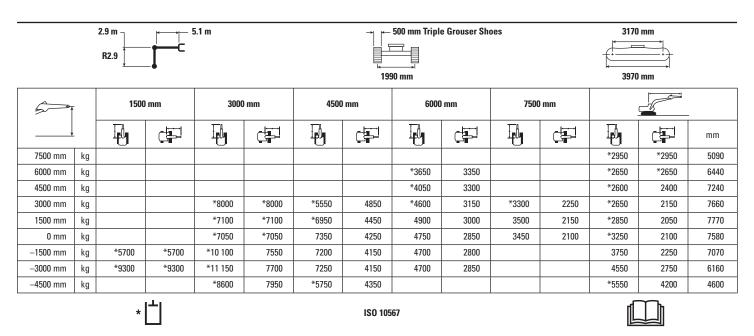
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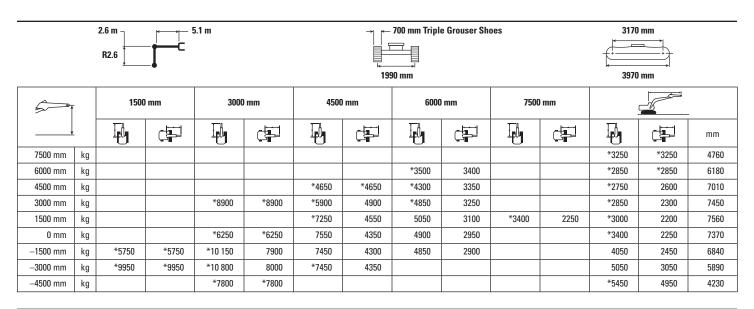


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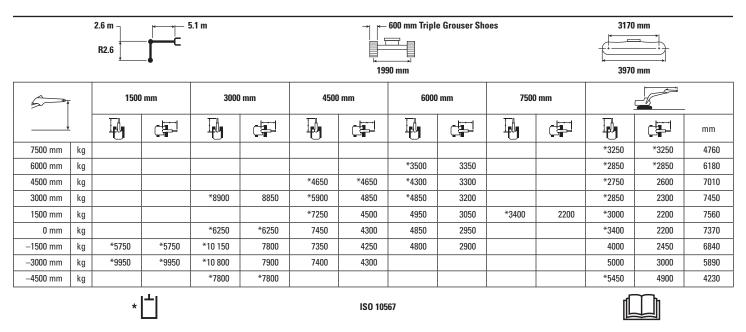
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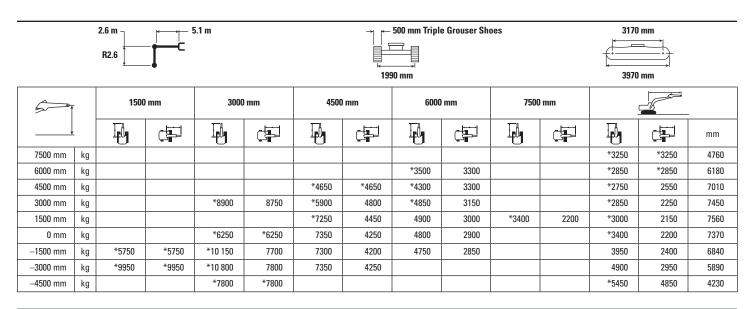


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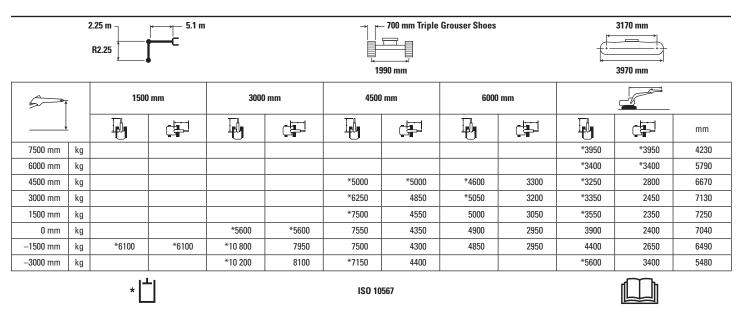
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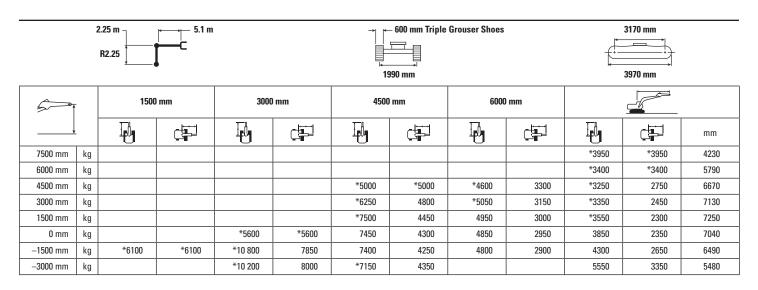


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

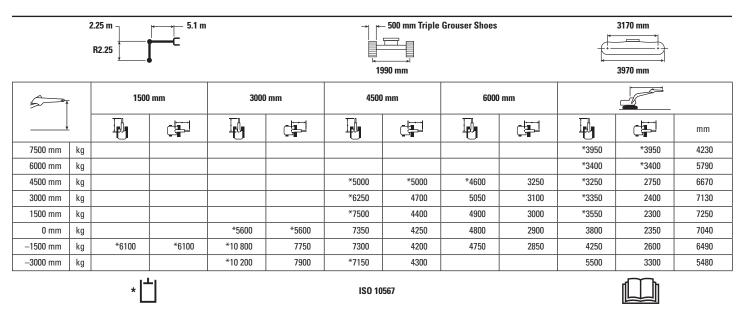
They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

#### Reach Boom Lift Capacities - Counterweight: 2.8 mt - without Bucket



#### Reach Boom Lift Capacities - Counterweight: 2.8 mt - without Bucket

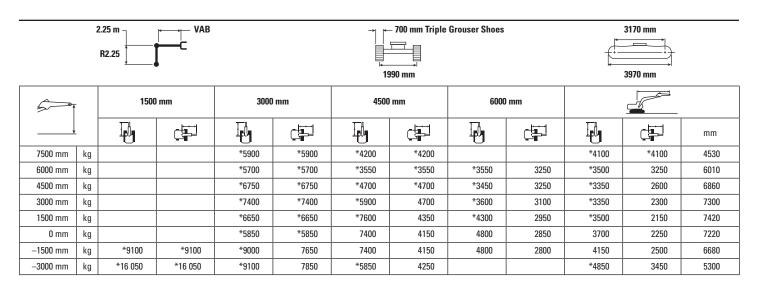


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

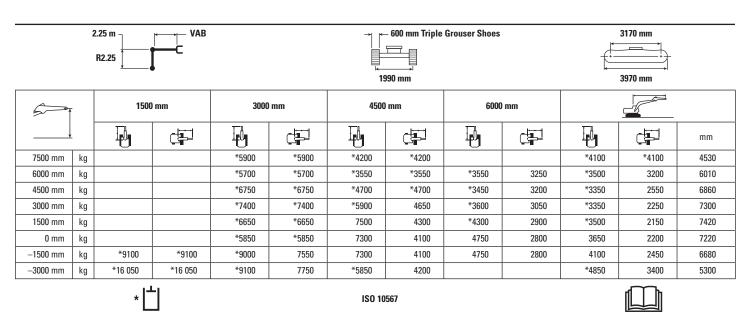
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Lift capacity stays with ±5% for all available track shoes.

#### Variable Angle Boom Lift Capacities – Counterweight: 2.8 mt – without Bucket



#### Variable Angle Boom Lift Capacities – Counterweight: 2.8 mt – without Bucket

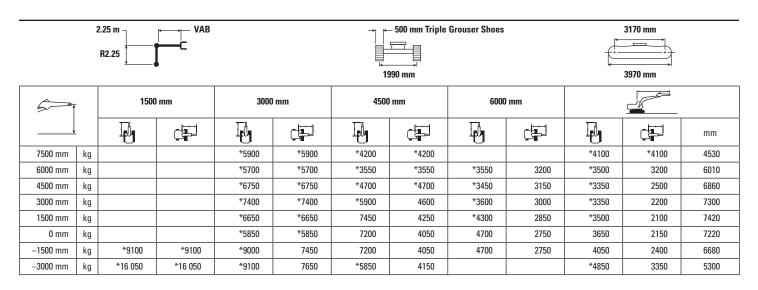


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

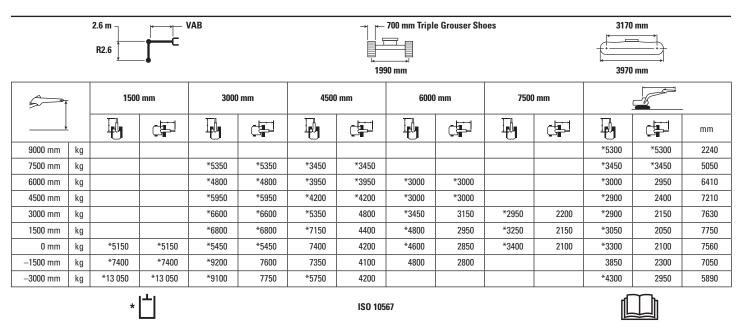
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Lift capacity stays with ±5% for all available track shoes.

#### Variable Angle Boom Lift Capacities – Counterweight: 2.8 mt – without Bucket



#### Variable Angle Boom Lift Capacities – Counterweight: 2.8 mt – without Bucket

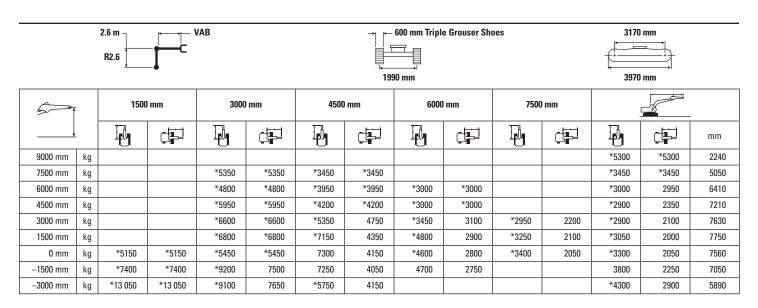


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007.

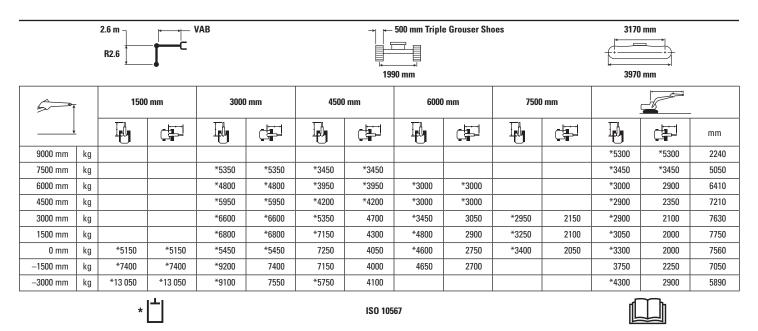
They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

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Lift capacity stays with ±5% for all available track shoes.

### Work Tool Offering Guide\* – Europe

Boom Type		Reach	n Boom	VA E	Boom		
Stick Size		R2.6	R2.25	R2.6	R2.25		
Hydraulic Hammer		H110Es H115Es H120Es	H110Es H115Es H120Es	H110Es H115Es H120Es	H110Es H115Es H120Es		
Crusher			P315				
Pulverizer		P215	P215				
Demolition & Sorting Grapple (D – Demolition shells, R – Recycling shells, CAN – fixed hingeplates for CW quick coupler usage)		G310B-D/R G310B-D/R CAN G313 GC G313 GC CAN G315 GC G315 GC CAN	G310B-D/R CAN G313 GC G313 GC CAN G315 GC G315 GC CAN G315 GC CAN G315 GC CAN G315 GC CAN G315 GC CAN G315 BC CAN G315B-D/R		G310B-D/R G310B-D/R CAN G313 GC G313 GC CAN G315 GC		
Demolition & Sorting Grapple	for RT60 Rototilt	G213 GC	G213 GC				
Scrap & Demolition Shear		S325	S325	S325	S325		
Compactor (Vibratory Plate)		CVP75	CVP75	CVP75	CVP75		
Orange Peel Grapple							
Pin Grabber Coupler	Cat-PG						
Dedicated Quick Coupler	CW-30	These work tools are available for the 316F L.					
	CW-30S		Consult your Cat dea	aler for proper match.			
	CWAC-40 (autoconnect)	_					

<sup>\*</sup>Offerings not available in all areas. Matches are dependent on excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

### Work Tool Offering Guide\* – Australia/New Zealand

Boom Type			Reach Boom	
Stick Size	R3.1	R2.9	R2.6	R2.25
Hydraulic Hammer	H110Es H115Es H120Es	H110Es H115Es H120Es	H110Es H115Es H120Es	H110Es H115Es H120Es
Multi-Processor				MP15 CC Jaw MP15 CR Jaw MP15 PS Jaw MP15 S Jaw
Crusher				P315
Pulverizer				P215
Demolition & Sorting Grapple	G310B	G310B	G310B	G310B G315B
Mobile Scrap & Demolition Shear	S325	S325	S325	S325
Compactor (Vibratory Plate)	CVP75	CVP75	CVP75	CVP75
Contractors' Grapple	G115B	G115B	G115B	G115B
Orange Peel Grapple				
Trash Grapple				
Thumbs		These work tool	s are available for the	2316F L
Rakes			Cat dealer for proper	
Center-Lock™ Pin Grabber Coupler				
Dedicated Quick Coupler				

<sup>\*</sup> Offerings not available in all areas. Matches are dependent on excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

#### **Bucket Specifications and Compatibility – Europe**

	Width	Capacity	city Weight	Fill	Reach	Boom	VA E	Boom
	mm	m³	kg	%	R2.25	R2.6	R2.25	R2.6
Without Quick Coupler								
General Duty (GD)	1100	0.80	601	100%	•	•	•	•
	1300	1.00	682	100%	Х	Х	θ	0
	1400	1.09	712	100%	Х	Х	0	0
Severe Duty (SD)	1200	0.91	722	90%	•	•	θ	$\Theta$
	Maximu	m load pin-on (pa	ayload + bucket)	kg	2375	2205	2120	1965
With Pin Grabber Quick Co	upler							
General Duty (GD)	1100	0.80	601	100%	•	θ	0	0
	1300	1.00	682	100%	0	$\Diamond$	$\Diamond$	$\Diamond$
	1400	1.09	712	100%	0	$\Diamond$	$\Diamond$	$\Diamond$
Severe Duty (SD)	1200	0.91	722	90%	θ	0	0	<b>\Q</b>
Maximum load with coupler (payload + bucket)				kg	1985	1815	1730	1575
With CW Dedicated Quick	Coupler (CW30/CW30s)							
General Duty (GD)	600	0.35	431	100%	•	•	•	•
	750	0.49	464	100%	•	•	•	•
	900	0.62	524	100%	•	•	•	•
	1100	0.79	583	100%	•	•	θ	$\Theta$
	1200	0.91	633	100%	θ	θ	0	0
	1300	1.00	663	100%	θ	0	0	<b>♦</b>
	1400	1.09	693	100%	Х	Х	$\Diamond$	<b>♦</b>
Heavy Duty (HD)	1200	0.91	649	100%	θ	θ	0	0
	1300	1.00	681	100%	θ	0	0	$\Diamond$
	1400	1.09	712	100%	Х	Х	$\Diamond$	$\Diamond$
	Maximum load	with coupler (pa	ayload + bucket)	kg	2155	1985	1900	1745

The above loads are in compliance with hydraulic excavator standard EN474, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with General Duty tips.

#### Maximum Material Density:

- 2100 kg/m³
- 1800 kg/m³
- → 1500 kg/m³
- O 1200 kg/m<sup>3</sup>
- ♦ 900 kg/m³
- X Not Recommended

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

#### **Bucket Specifications and Compatibility – Australia/New Zealand**

	Width	Capacity	Weight	Fill	Reach Boom				
	mm	m³	kg	%	R2.25	R2.6	R2.9		
With Pin Grabber Quick Coupler									
General Duty (GD)	500	0.30	403	100%	•	•	•		
	600	0.35	433	100%	•	•	•		
	750	0.49	476	100%	•	•	•		
	900	0.62	537	100%	•	•	•		
	1050	0.76	590	100%	•	$\Theta$	$\Theta$		
	1200	0.91	645	100%	$\Theta$	0	0		
Maximum load with coupler (payload + bucket)				kg	1950	1815	1705		

The above loads are in compliance with hydraulic excavator standard EN474, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with General Duty tips.

#### **Maximum Material Density:**

- 2100 kg/m³
- 1800 kg/m³
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### 316F L Standard Equipment

#### **Standard Equipment**

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

#### **ENGINE**

- C4.4 ACERT diesel engine
- · Biodiesel capable
- Meets Tier 4 Final and EU Stage IV emission standards
- 2300 m altitude capability
- Electric priming pump
- Automatic engine speed control
- Economy and high power modes
- · Two-speed travel
- Side-by-side cooling system
- · Radial seal air filter
- Primary filter with water separator and water separator indicator
- · Secondary filter
- Screen filter in fuel line
- Cold weather battery -25° C
- Jump start receptacle
- Ambient capability, 52° C

#### **HYDRAULIC SYSTEM**

- · Regeneration circuit for boom and stick
- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter

#### CAB

- Pressurized operator station with positive filtration
- · Sliding upper door window
- · Radial wiper and washer
- · Glass-breaking safety hammer
- Removable lower windshield with in cab storage bracket
- Coat hook
- · Beverage holder
- · Literature holder
- Seat belt, 51 mm
- Two 12V stereo speakers
- Storage shelf suitable for lunch or toolbox
- Color LCD display with indicators, filter/ fluid change, and working hour information
- · Adjustable armrest
- Height adjustable joystick consoles
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers
- Two power outlets, 10 amp (total)
- Laminated glass front upper window and tempered other windows
- · Seat, high-back air suspension with heater
- Air pre-filter

#### UNDERCARRIAGE

- · Grease Lubricated Track GLT2, resin seal
- Towing eye on base frame
- · Swivel guard

#### COUNTERWEIGHT

• 2.8 mt

#### **ELECTRICAL**

- 80 amp alternator
- · Circuit breaker
- Capability to electronically connect a beacon

#### LIGHTS

- Working lights, cab and boom mounted with time delay function
- Exterior lights integrated into storage box

#### **SECURITY**

- Cat one key security system
- Door locks
- Cap locks on fuel and hydraulic tanks
- · Lockable external tool/storage box
- Signaling/warning horn
- · Secondary engine shutoff switch
- Openable skylight for emergency exit
- · Rearview camera

#### **TECHNOLOGY**

• Product Link

### 316F L Optional Equipment

#### **Optional Equipment**

Optional equipment may vary. Consult your Cat dealer for details.

#### **ENGINE**

- · Quick drains, engine and hydraulic oil
- · Battery, cold weather
- Electric refueling pump

#### **HYDRAULIC SYSTEM**

- Control pattern quick-changer, two way
- · Auxiliary hydraulics
- Boom and stick High Pressure lines
- Boom and stick Medium Pressure lines
- · Boom, stick and bucket QC lines

#### **CAB**

- · Left foot switch
- Left pedal
- · Straight travel pedal
- Rain protector
- AM/FM radio
- Radio with MP3 auxiliary audio port
- Travel alarm
- Sunscreen

#### **UNDERCARRIAGE**

- 500 mm (20") triple grouser shoes
- 600 mm triple grouser shoes
- 700 mm triple grouser shoes
- Full-length track guiding guard
- Heavy duty bottom guard
- · Center track guiding guard
- Segmented (2 piece) track guiding guard

#### **FRONT LINKAGE**

- Reach boom, 5.1 m (with BLCV, SLCV)
- -3.1 m stick
- -2.9 m stick
- -2.6 m stick (with/without Grade Control)
- -2.25 m stick
- Variable Angle boom (with BLCV, SLCV)
- -2.6 m stick (with/without Grade Control)
- -2.25 m stick
- Bucket linkage (with lifting eye)
- CW dedicated and Pin Grabber quick couplers

#### **SECURITY**

- FOGS (Falling Object Guard), bolt-on
- Side steel bumper
- Right side view camera

#### **TECHNOLOGY**

• Cat Grade Control Depth and Slope

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

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