

316F L Hydraulic Excavator Specifications

Engine

Engine Model	Cat C4.4 ACERT	
Net Power – SAE J1349	88 kW	117 hp
Gross Power – SAE J1995	91 kW	122 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5.00 in
Displacement	4.4 L	269 in ³

Weights

Minimum Operating Weight*	17 500 kg	38,580 lb
Maximum Operating Weight**	18 010 kg	39,680 lb

*5.1 m (16'9") boom, 2.9 m (9'6") stick, 2.8 mt (3.08 t) counterweight, 0.76 m³ (1.00 yd³) GD bucket, and 600 mm (24") shoes.

**5.1 m (16'9") boom, 3.1 m (10'2") stick, 3.05 mt (3.36 t) counterweight, 0.76 m³ (1.00 yd³) GD bucket, 700 mm (28") shoes.

Hydraulic System

Main System – Maximum Flow (Total)	300 L/min	79 gal
Swing System – Maximum Flow	150 L/min	40 gal
Maximum Pressure – Equipment	35 000 kPa	5,076 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	23 000 kPa	3,340 psi
Pilot System – Maximum Flow	25.8 L/min	1,574 in ³ /min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	110 mm	4 in
Boom Cylinder – Stroke	1193 mm	47 in
Stick Cylinder – Bore	120 mm	5 in
Stick Cylinder – Stroke	1331 mm	52 in
Bucket Cylinder – Bore	110 mm	4 in
Bucket Cylinder – Stroke	1039 mm	41 in

Drive

Maximum Travel Speed	5.2 km/h	3.2 mph
Maximum Drawbar Pull	156.2 kN	35,115 lbf

Swing Mechanism

Swing Speed	8.9 rpm	
Swing Torque	49.6 kN·m	36,580 lb·ft

Service Refill Capacities

Fuel Tank Capacity	290 L	76.61 gal
Cooling System	24 L	6.34 gal
Engine Oil (with filter)	13.5 L	3.57 gal
Swing Drive	2.4 L	0.63 gal
Final Drive (each)	5 L	1.32 gal
Hydraulic System (including tank)	190 L	50.19 gal
Hydraulic Tank	106 L	28.00 gal
DEF Tank Capacity	44 L	11.62 gal

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 – ISO 6396	71 dB(A)
Spectator – ISO 6395	102 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- 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.

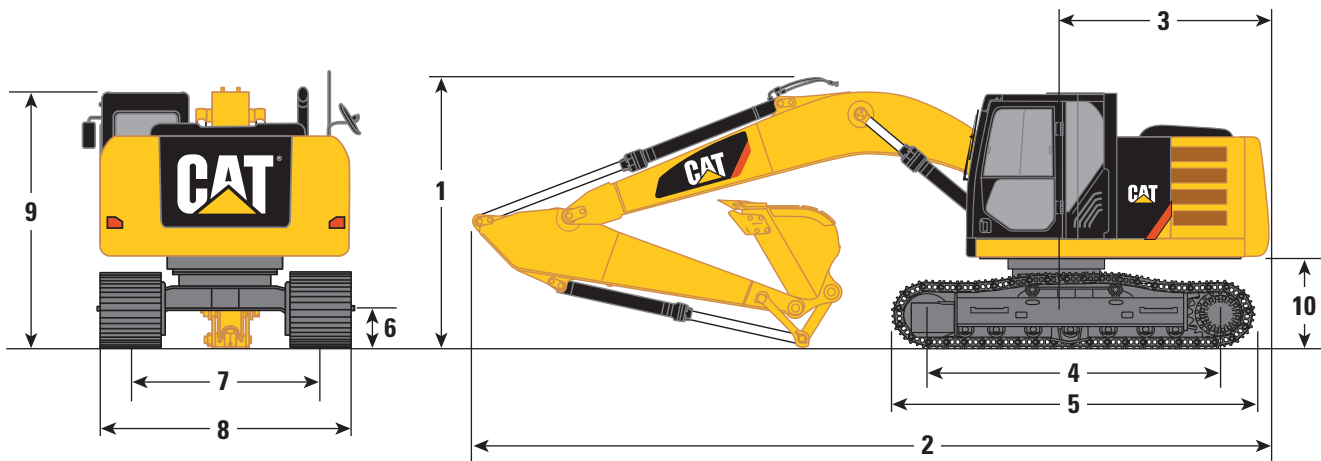
Standards

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

316F L Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate.



Stick	Reach Booms 5.1 m (16'9")	
	R3.1 (10'2")	R2.9 (9'6")
	mm (ft)	mm (ft)
1 Shipping Height*	3190 (10'5")	3090 (10'2")
Shipping Height at Boom Top	3190 (10'5")	3080 (10'1")
Shipping Height with Guard Rail	2940 (9'7")	2940 (9'7")
Shipping Height with Top Guard	3100 (10'2")	3100 (10'2")
2 Shipping Length	8580 (28'2")	8580 (28'2")
3 Tail Swing Radius	2500 (8'2")	2500 (8'2")
4 Length to Center of Rollers	3170 (10'5")	3170 (10'5")
5 Track Length	3970 (13'0")	3970 (13'0")
6 Ground Clearance	440 (1'5")	440 (1'5")
7 Track Gauge	1990 (6'6")	1990 (6'6")
8 Transport Width		
600 mm (24") Shoes	2590 (8'6")	2590 (8'6")
700 mm (28") Shoes	2690 (8'10")	2690 (8'10")
9 Cab Height	2890 (9'6")	2890 (9'6")
Cab Height with Top Guard	3100 (10'2")	3100 (10'2")
10 Counterweight Clearance**	1010 (3'4")	1010 (3'4")

All dimensions were calculated with a 0.76 m³ (1.00 yd³), 900 mm (41 in) bucket.

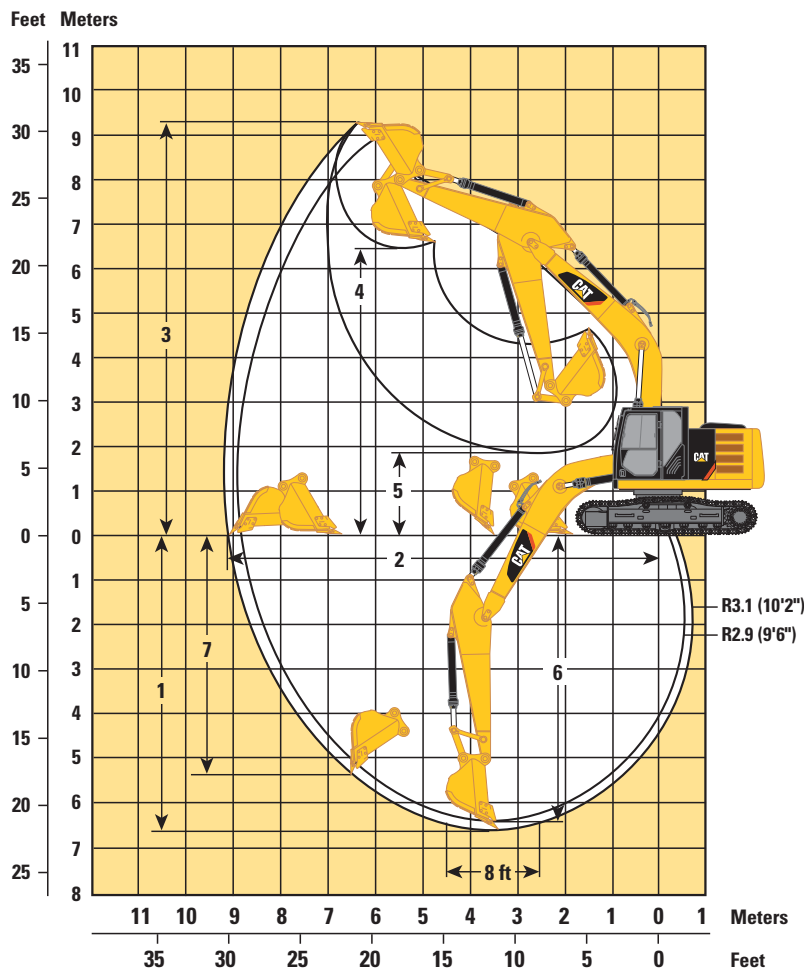
*Including shoe lug height.

**Without shoe lug height.

316F L Hydraulic Excavator Specifications

Working Ranges

All dimensions are approximate.



Stick	Reach Booms 5.1 m (16'9")	
	R3.1 (10'2")	R2.9 (9'6")
	mm (ft)	mm (ft)
1 Maximum Digging Depth	6590 (21'7")	6390 (21'0")
2 Maximum Reach at Ground Level	9260 (30'5")	8990 (29'6")
3 Maximum Cutting Height	9210 (30'3")	8880 (29'2")
4 Maximum Loading Height	6570 (21'7")	6270 (20'7")
5 Minimum Loading Height	1810 (5'11")	2000 (6'7")
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6400 (21'0")	6160 (20'3")
7 Maximum Vertical Wall Digging Depth	5400 (17'9")	4910 (16'1")

All dimensions were calculated with a 0.76 m³ (1.00 yd³), 900 mm (41 in) bucket.

316F L Hydraulic Excavator Specifications

Operating Weight and Ground Pressure

	700 mm (28") Triple Grouser Shoes		600 mm (24") Triple Grouser Shoes	
	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)
Reach Boom – 5.1 m (16'9")				
R3.1 (10'2")	17 760 (39,150)	36 (5.20)	17 510 (38,600)	42 (6.06)
R2.9 (9'6")	17 740 (39,110)	36 (5.20)	17 500 (38,580)	42 (6.05)
Heavy Counterweight – 3.1 mt (3.4 t)				
R3.1 (10'2")	18 010 (39,710)	37 (5.31)	17 760 (39,160)	42 (6.11)

Major Component Weights

	kg	lb
Base Machine (with boom cylinder, without counterweight, front linkage and track)	5720	12,610
Long Undercarriage	3770	8,310
Counterweight 2.8 mt (3.1 t)	2800	6,170
Heavy Counterweight 3.05 mt (3.36 t)	3050	6,730
Boom (includes lines, pins and stick cylinder)		
Reach Boom – 5.1 m (16'9")	1320	2,910
Reach Boom – 5.1 m (16'9") for CGC	1330	2,930
Stick (includes lines, pins, bucket cylinder, and bucket linkage)		
R3.1 (10'2")	930	2,050
R2.9 (9'6")	910	2,010
Track Shoe (Long/per two tracks)		
600 mm (24") Triple Grouser	2420	5,340
700 mm (28") Triple Grouser	2650	5,840

All weights are rounded up to nearest 10 kg and lb except for buckets. Kg and lb were rounded up separately so some of the kg and lb do not match.

Base machine includes 75 kg (165 lb) operator weight, 90% fuel weight, and undercarriage with center guard.

316F L Hydraulic Excavator Specifications

Bucket and Stick Forces

Stick	Reach Booms 5.1 m (16'9")	
	R3.1 (10'2")	R2.9 (9'6")
	kN (lbf)	kN (lbf)
General Duty		
Bucket Digging Force (SAE)	98 (22,000)	98 (22,000)
Stick Digging Force (SAE)	69 (15,500)	73 (16,400)
Severe Duty		
Bucket Digging Force (SAE)	96 (21,600)	96 (21,600)
Stick Digging Force (SAE)	69 (15,500)	72 (16,200)