Volvo EC140E in detail.

Engine

The latest generation, Volvo engine Tier 4 Final emissions compliant diesel engine fully meets the demands of the latest, emsissions regulations. Featuring Volvo Advanced Combustion Technology (V-ACT), it is designed to deliver superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and air-to-air intercooler, and electronic engine controls to optimize machine performance.
Air Filter: 3-stage with precleaner
Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

Engine		Volvo		D4J
Max power at	r/s / r/min		33.3 / 2 000	
Net, ISO 9249/SAE J1349	kW	hp	89	119
Gross, ISO 14396/SAE J1995	kW	hp	90	121
Max power	Nm	lbf ft	566	417
at engine speed		r/min		1 500
No. of cylinders				4
Displacement	l	in^3	4.04	247
Bore	mm	in	101	3.98
Stroke	mm	in	126	4.96

Electrical system

Well protected high-capacity electrical system. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard.
Contronics provides advanced monitoring of machine functions and important diagnostic information.

Voltage		V		24
Batteries	V / Ah		2 x 12 / 100	
Alternator	V / Ah		28 / 80	
Start motor	V / kW		24 / 5.5	

Service refill capacities

Fuel tank	l	gal	250	66
Hydraulic system, total	l	gal	230	61
Hydraulic tank	l	gal	85	22
DEF tank	l	gal	20	5
Engine oil	l	gal	16	4
Engine coolant	l	gal	28	7
Swing reduction unit	l	gal	3.9	1
Travel reduction unit	l	gal	2 x 2.2	2 x 1

Swing system

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and antirebound valve are standard.

Max. slew speed		r/min		12.5
Max. slew torque	kNm	lbf ft	38.8	28,620

Drive

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Max. drawbar pull	kN	lbf	119	26,680
Max. travel speed	km/h	mph	3.1 / 5.5	1.9 / 3.4
Gradeability		°		35

Undercarriage

Robust X-shaped frame with greased and sealed track chains as standard.

Track shoe				2 x 46
Link pitch	mm	in	171	6.8
Shoe width, triple grouser	mm	in	500/ 600/ 700/ 750	20/ 24/ 28/ 30
Shoe width, triple grouser (HD)	mm	in	600	24
Shoe width, rubber grouser	mm	in	500	20
Bottom rollers				2 x 7
Top rollers				2 x 1

Hydraulic system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.

The following important functions are included in the system:

Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.

Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.

Swing priority: Gives priority to swing functions for faster simultaneous operations.

Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.

Power boost: All digging and lifting forces are increased.

Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

Main pump

Type			2 x variable displacement axial piston pumps	
Maximum flow	l/min	gpm	2 x 124	2 x 33
Pilot pump,				
Type				Gear pump
Maximum flow	l/min	gpm	1 x 20	1 x 5
Relief valve setting:				
Implement	MPa	psi	32.4 / 34.3	4,690 / 4,980
Travel circuit	MPa	psi	34.3	4,980
Slew circuit	MPa	psi	24.5	3,560
Pilot circuit	MPa	psi	3.9	570

Hydraulic motors

Travel: Variable displacement axial piston motor with mechanical brake

Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic cylinders

Mono boom				2
Bore x Stroke	ø x mm	ø x in	105 x 980	4.1 x 38.6
2 piece boom				1
Bore x Stroke	ø x mm	ø x in	160 x 765	6.3 x 30.1
Arm				1
Bore x Stroke	ø x mm	ø x in	120 x 1 045	4.7 x 41.1
Bucket				1
Bore x Stroke	ø x mm	ø x in	100 x 865	3.9 x 34.1
Dozer blade				2
Bore x Stroke	ø x mm	ø x in	130 x 270	5.1 x 10.6

Cab

The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door.

Integrated air-conditioning and heating system: The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.

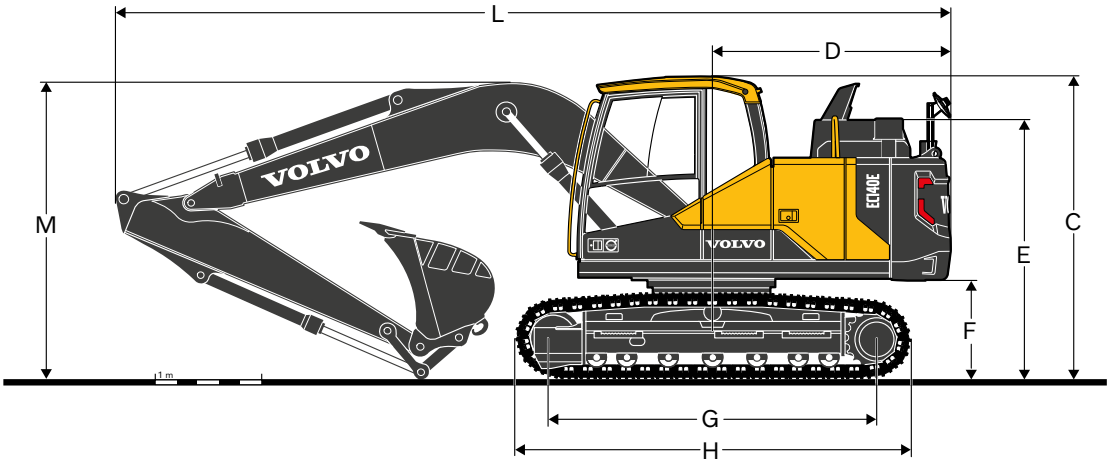
Ergonomic operator's seat: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

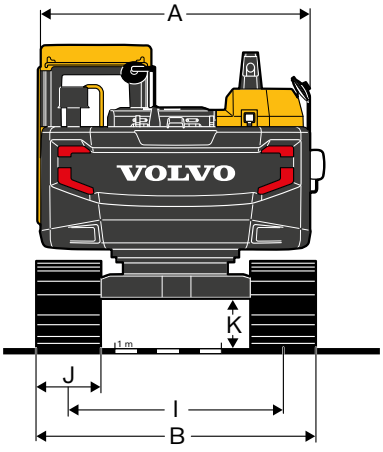
Sound Level

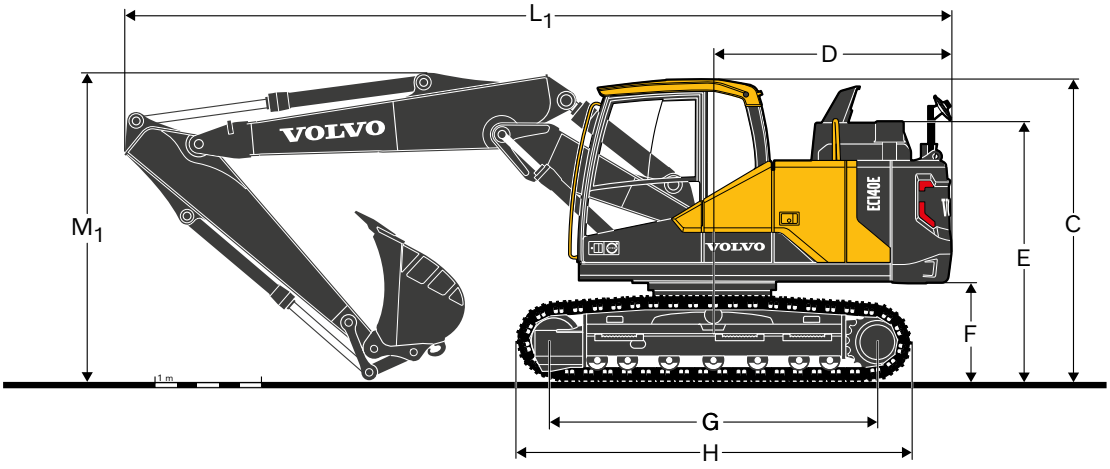
Sound pressure level in cab according to ISO 6396		
L_{pA} (standard)	dB	69
L_{pA} (tropical)	dB	70
External sound level according to ISO 6395, EU Noise Directive 2000/14/EC		
L_{wA} (standard)	dB	100
L_{wA} (tropical)	dB	101

Specifications.

DIMENSIONS





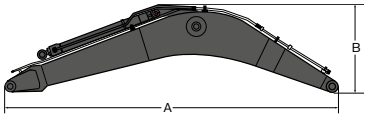


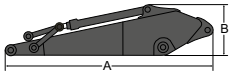
DIMENSIONS

Description		Unit		EC140EL					
Boom (mono & 2-piece)		m, ft in		4.6, 15'1"					
Arm		m	ft in	2.1	6'11"	2.5	8'2"	3	9'10"
A	Overall width of upper structure	mm	ft in	2 490	8'2"	2 490	8'2"	2 490	8'2"
B	Overall width	mm	ft in	2 590	8'6"	2 590	8'6"	2 590	8'6"
C	Overall height of cab	mm	ft in	2 800	9'2"	2 800	9'2"	2 800	9'2"
D	Tail swing radius	mm	ft in	2 200	7'3"	2 200	7'3"	2 200	7'3"
E	Overall height of engine hood	mm	ft in	2 400	7'10"	2 400	7'10"	2 400	7'10"
F	Counterweight clearance*	mm	ft in	920	3'0"	920	3'0"	920	3'0"
G	Tumbler length	mm	ft in	3 040	10'0"	3 040	10'0"	3 040	10'0"
H	Track length	mm	ft in	3 760	12'4"	3 760	12'4"	3 760	12'4"
I	Track gauge	mm	ft in	1 990	6'6"	1 990	6'6"	1 990	6'6"
J	Shoe width	mm	ft in	600	2'0"	600	2'0"	600	2'0"
K	Min. ground clearance*	mm	ft in	436	1'5"	436	1'5"	436	1'5"
L	Overall length	mm	ft in	7 720	25'4"	7 720	25'4"	7 650	25'1"
L_1	Overall length	mm	ft in	7 700	25'3"	7 660	25'2"	7 560	24'10"
M	Overall height of boom	mm	ft in	2 710	8'11"	2 830	9'3"	3 210	10'6"
M_1	Overall height of boom	mm	ft in	2 720	8'11"	2 860	9'5"	3 310	10'10"

* Without shoe grouser

$_1$ 2-piece boom

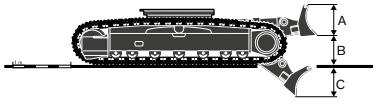




Description		Unit		mono		2-piece		Description		Unit							
Boom		m	ft in	4.6	15'1"	4.6	15'1"	Arm		m	ft in	2.1	6'11"	2.5	8'2"	3.0	9'10"
A	Length	mm	ft in	4 770	15'8"	4 765	15'8"	A	Length	mm	ft in	2 800	9'2"	3 200	10'6"	2 700	8'10"
B	Height	mm	ft in	1 370	4'6"	1 225	4'0"	B	Height	mm	ft in	710	2'4"	710	2'4"	710	2'7"
	Width	mm	ft in	545	1'9"	545	1'9"		Width	mm	ft in	300	1'0"	300	1'0"	300	1'0"
	Weight	kg	lb	1 100	2,430	1 900	4,190		Weight	kg	lb	555	1,220	625	1,380	685	1,510

* Includes cylinder, piping and pin, excludes boom cylinder pin

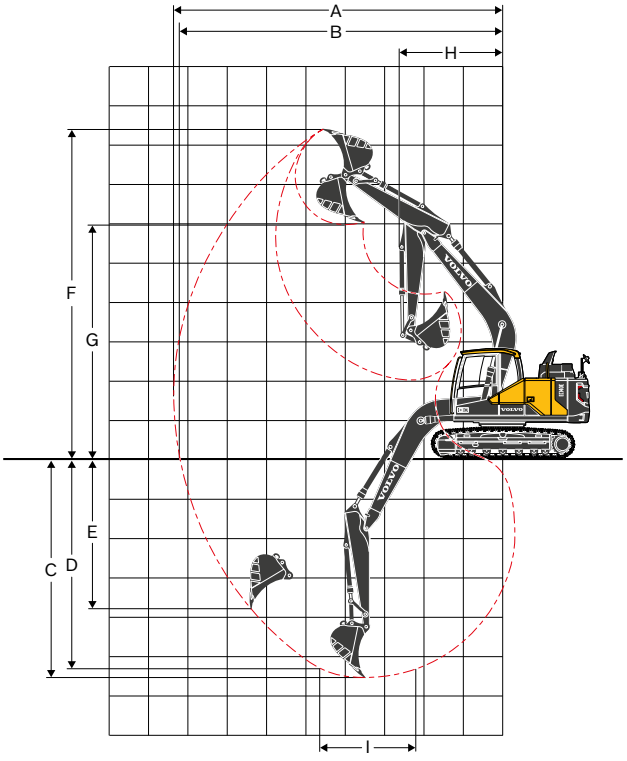
* Includes cylinder, linkage and pin

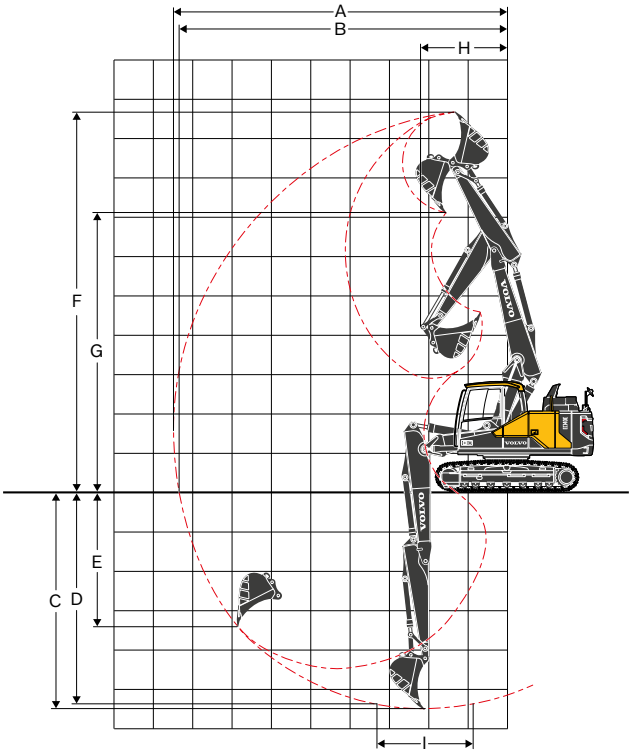


Front dozer blade		Unit			
A	Height	mm	ft in	580	1'11"
	Width	mm	ft in	2 590	8'6"
	Weight	kg	lb	458	1,260
B	Lift height	mm	ft in	480	1'7"
C	Digging depth	mm	ft in	600	2'0"

Specifications.

WORKING RANGES





WORKING RANGES

Description			Unit		EC140EL											
Boom			m, ft in		4.6, 15'1" mono						4.6, 15'1" 2-piece					
Arm			m	ft in	2.1	6'11"	2.5	8'2"	3.0	9'10"	2.1	6'11"	2.5	8'2"	3.0	9'10"
A	Max. digging reach		mm	ft in	7 980	26'2"	8 360	27'5"	8 850	29'0"	8 080	26'6"	8 460	27'9"	8 960	29'5"
B	Max. digging reach on ground		mm	ft in	7 840	25'9"	8 220	27'0"	8 720	28'7"	7 930	26'0"	8 320	27'4"	8 830	29'0"
C	Max. digging depth		mm	ft in	5 160	16'11"	5 560	18'3"	6 060	19'11"	5 080	16'8"	5 480	18'0"	5 980	19'7"
D	Max. digging depth (2.44 m / 8' level)		mm	ft in	4 900	16'1"	5 340	17'6"	5 880	19'3"	4 960	16'3"	5 360	17'7"	5 870	19'3"
E	Max. vertical wall digging depth		mm	ft in	3 970	13'0"	4 330	14'2"	4 870	16'0"	3 970	13'0"	4 340	14'3"	4 830	15'10"
F	Max. cutting height		mm	ft in	8 120	26'8"	8 360	27'5"	8 710	28'7"	9 270	30'5"	9 630	31'7"	10 110	33'2"
G	Max. dumping height		mm	ft in	5 720	18'9"	5 950	19'6"	6 290	20'8"	6 730	22'1"	7 100	23'4"	7 570	24'10"
H	Min. front swing radius		mm	ft in	2 570	8'5"	2 630	8'8"	2 740	9'0"	1 740	5'9"	1 990	6'6"	2 410	7'11"
DIGGING FORCES WITH DIRECT FIT BUCKET																
Bucket radius			mm	ft in	1 274	4'2"	1 274	4'2"	1 274	4'2"	1 274	4'2"	1 274	4'2"	1 274	4'2"
Breakout force - bucket	Normal	SAE J1179	kN	lbf	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100	80.5	18,100
	Power boost	SAE J1179	kN	lbf	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200	85.4	19,200
	Normal	ISO 6015	kN	lbf	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480	91.1	20,480
	Power boost	ISO 6015	kN	lbf	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720	96.6	21,720
Tearout force - dipper arm	Normal	SAE J1179	kN	lbf	69.6	15,640	62.1	13,960	55.2	12,420	69.6	15,640	62.1	13,960	55.2	12,420
	Power boost	SAE J1179	kN	lbf	73.8	16,590	65.9	14,800	58.6	13,170	73.8	16,590	65.9	14,800	58.6	13,170
	Normal	ISO 6015	kN	lbf	71.5	16,070	63.5	14,280	56.3	12,660	71.5	16,070	63.5	14,280	56.3	12,660
	Power boost	ISO 6015	kN	lbf	75.8	17,040	67.4	15,150	59.7	13,430	75.8	17,040	67.4	15,150	59.7	13,430
Rotation angle, bucket			°		175		175		175		175		175		175	

MACHINE WEIGHTS AND GROUND PRESSURE

EC140EL			4.6m / 15'1" boom, 2.5m / 8'2" arm, 440kg / 970lb - 540l / 143gal bucket, 2 450kg / 5,400lb counterweight						4.6m / 15'1" 2-piece boom					
Description	**Shoe width**		**Operating weight**		**Ground pressure**		**Overall width**		**Operating weight**		**Ground pressure**		**Overall width**	
	mm	**in**	**kg**	**lb**	**kPa**	**psi**	**mm**	**in**	**kg**	**lb**	**kPa**	**psi**	**mm**	**in**
Without dozer blade														
Triple grouser	500	20	14 190	31,290	42.2	6.1	2 490	8'2"	14 610	32,220	43.1	6.3	2 490	8'2"
	600	24	14 390	31,730	35.3	5.1	2 590	8'6"	14 810	32,660	36.3	5.3	2 590	8'6"
	700	28	14 590	32,170	31.4	4.6	2 690	8'10"	15 010	33,100	32.4	4.7	2 690	8'10"
	750	30	14 770	32,570	29.4	4.3	2 740	9'0"	15 190	33,490	30.4	4.4	2 740	9'0"
Triple grouser (HD)	600	24	14 460	31,880	36.3	5.3	2 590	8'6"	14 880	32,810	37.3	5.4	2 590	8'6"
Rubber grouser	500	20	14 230	31,380	42.2	6.1	2 490	8'2"	14 650	32,300	43.1	6.3	2 490	8'2"
With dozer blade														
Triple grouser	500	20	15 130	33,360	45.1	6.5	2 490	8'2"	15 550	34,290	46.1	6.7	2 490	8'2"
	600	24	15 330	33,800	38.2	5.5	2 590	8'6"	15 750	34,730	39.2	5.7	2 590	8'6"
	700	28	15 530	34,240	33.3	4.8	2 690	8'10"	15 950	35,170	34.3	5.0	2 690	8'10"
	750	30	15 710	34,640	31.4	4.6	2 740	9'0"	16 130	35,570	32.4	4.7	2 740	9'0"
Triple grouser (HD)	600	24	15 400	33,960	38.2	5.5	2 590	8'6"	15 820	34,880	39.2	5.7	2 590	8'6"
Rubber grouser	500	20	15 170	33,450	45.1	6.5	2 490	8'2"	15 590	34,380	46.1	6.7	2 490	8'2"

BUCKET SELECTION GUIDE

Bucket type		Capacity		Cutting width		Weight		Teeth	EC140EL					
									600mm / 20' shoe, 2 100kg / 4,630lb counterweight			600mm / 20' shoe, 2 450kg / 5,400lb counterweight		
									4.6m / 15'1" boom					
		m³	**yd³**	**mm**	**ft**	**kg**	**lb**	**EA**	**2.1m / 6'11" arm**	**2.5m / 8'2" arm**	**3.0m / 9'10" arm**	**2.1m / 6'11" arm**	**2.5m / 8'2" arm**	**3.0m / 9'10" arm**
Direct fit Buckets	**General purpose**	0.66	0.86	1 050	41.34	480	1,059	4	C	C	C	C	C	C
		0.77	1.01	1 200	47.24	541	1,193	5	C	C	B	C	C	C
		0.25	0.33	450	17.72	330	729	3	C	C	C	C	C	C
		0.33	0.43	600	23.62	361	797	3	C	C	C	C	C	C
		0.42	0.55	750	29.53	392	864	3	C	C	C	C	C	C
		0.54	0.71	900	35.43	440	971	4	C	C	C	C	C	C
	Heavy duty	0.25	0.33	450	17.72	320	705	3	D	D	D	D	D	D
		0.33	0.43	600	23.62	352	777	3	D	D	D	D	D	D
		0.42	0.55	750	29.53	384	848	3	D	D	D	D	D	D
		0.54	0.71	900	35.43	445	981	4	D	D	D	D	D	D

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.
The recommendations are given as a guide only, based on typical operation conditions.
Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum materal density

	kg/m³	lb/yd³	
A	1 200 - 1 300	2,000 - 2,200	Coal, Caliche, Shale
B	1 400 - 1 600	2,300 - 2,700	Wet earth and clay, Limestone, Sandstone
C	1 700 - 1 800	2,800 - 3,100	Granite, Wet sand, Well blasted rock
D	> 1 900	> 3,200	Wet mud, Iron ore

Specifications.

LIFTING CAPACITY EC140EL without dozer blade

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level		1.5m, 5 ft		3.0m, 10 ft		4.5m, 15 ft		6.0m, 20 ft		Max. Reach		
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	3 390	4.9 m
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	7,710	15.8 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 450	6.0 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	*7,600	*7,600	-	-	*7,850	5,470	19.5 ft
	3 m	kg	-	-	*6 230	*6 230	*4 330	3 700	3 710	2 410	3 220	2 090	6.5 m
	10 ft	lb	-	-	*13,270	*13,270	*9,380	7,950	7,950	5,160	7,130	4,620	21.4 ft
	1.5 m	kg	-	-	-	-	*5 390	3 490	3 620	2 320	3 040	1 960	6.7 m
	5 ft	lb	-	-	-	-	*11,650	7,490	7,770	4,990	6,710	4,320	22.0 ft
	0 m	kg	-	-	*5 400	*5 400	5 460	3 350	3 550	2 260	3 120	2 000	6.5 m
	0 ft	lb	-	-	*12,670	*12,670	11,680	7,190	7,620	4,850	6,890	4,410	21.5 ft
	-1.5 m	kg	*5 010	*5 010	*9 440	6 080	5 410	3 310	-	-	3 540	2 250	6.0 m
	-5 ft	lb	*11,310	*11,310	*20,480	13,010	11,590	7,110	-	-	7,830	4,980	19.6 ft
	-3 m	kg	-	-	*8 220	6 200	*5 470	3 380	-	-	4 800	3 000	4.9 m
	-10 ft	lb	-	-	*17,740	13,280	*11,710	7,270	-	-	*10,660	6,710	16.0 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	2 920	5.4 m
Arm: 2.5m / 8'2"	20 ft	lb	-	-	-	-	*6,350	*6,350	-	-	*7,080	6,600	17.5 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 470	*3 170	2 210	6.4 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	*6,740	*6,740	*7,080	5,310	*7,000	4,920	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	3 720	*3 490	2 410	2 950	1 910	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	8,030	*7,630	5,190	6,520	4,230	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	3 490	3 600	2 310	2 790	1 800	7.1 m
	5 ft	lb	-	-	*16,030	13,570	*10,980	7,530	7,770	4,980	6,170	3,970	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	5 420	3 320	3 520	2 230	2 850	1 820	6.9 m
	0 ft	lb	-	-	*13,890	12,940	11,670	7,170	7,580	4,820	6,300	4,030	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	5 980	5 350	3 260	3 480	2 200	3 180	2 020	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	12,870	11,510	7,030	7,520	4,760	7,030	4,470	21.0 ft
	-3 m	kg	*8 940	*8 940	*8 690	6 080	5 390	3 300	-	-	4 080	2 570	5.4 m
	-10 ft	lb	*20,220	*20,220	*18,770	13,070	11,610	7,120	-	-	9,120	5,730	17.7 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	-	-	*2 860	2 490	*2 810	2 460	6.0 m
Arm: 3.0m / 9'10"	20 ft	lb	-	-	-	-	-	-	-	-	*6,250	5,540	19.6 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	-	-	*2 780	2 490	*2 640	1 940	6.9 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	-	-	*6,140	5,360	*5,830	4,310	22.7 ft
	3 m	kg	-	-	-	-	*3 440	*3 440	*3 140	2 410	*2 630	1 700	7.4 m
	10 ft	lb	-	-	-	-	*7,460	*7,460	*6,870	5,190	*5,800	3,760	24.3 ft
	1.5 m	kg	-	-	*7 320	6 420	*4 620	3 500	3 600	2 300	2 510	1 600	7.6 m
	5 ft	lb	-	-	*15,710	13,840	*10,010	7,560	7,750	4,960	5,540	3,540	24.9 ft
	0 m	kg	-	-	*6 510	5 990	5 410	3 300	3 490	2 200	2 550	1 620	7.4 m
	0 ft	lb	-	-	*15,160	12,890	11,630	7,120	7,520	4,750	5,620	3,570	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	5 880	5 290	3 200	3 430	2 150	2 790	1 760	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	12,650	11,380	6,910	7,390	4,630	6,170	3,900	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	5 930	5 300	3 210	3 460	2 170	3 420	2 150	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	12,760	11,400	6,920	-	-	7,620	4,790	19.7 ft
	-4.5 m	kg	-	-	*7 210	6 140	-	-	-	-	*4 480	3 360	4.5 m
	-15 ft	lb	-	-	*15,330	13,220	-	-	-	-	*9,920	7,690	14.4 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	*3 500	4.9 m
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	*7,730	15.8 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 610	6.0 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	*7,600	*7,600	-	-	*7,850	5,820	19.5 ft
	3 m	kg	-	-	*6 230	*6 230	*4 330	3 910	*3 750	2 550	3 400	2 230	6.5 m
	10 ft	lb	-	-	*13,270	*13,270	*9,380	8,440	*8,210	5,500	7,530	4,940	21.4 ft
	1.5 m	kg	-	-	-	-	*5 390	3 700	3 800	2 470	3 220	2 100	6.7 m
	5 ft	lb	-	-	-	-	*11,650	7,990	8,200	5,330	7,100	4,630	22.0 ft
	0 m	kg	-	-	*5 400	*5 400	5 730	3 560	3 730	2 410	3 300	2 140	6.5 m
	0 ft	lb	-	-	*12,670	*12,670	12,340	7,690	8,050	5,200	7,280	4,720	21.5 ft
	-1.5 m	kg	*5 010	*5 010	*9 440	6 460	5 690	3 520	-	-	3 740	2 410	6.0 m
	-5 ft	lb	*11,310	*11,310	*20,480	13,880	12,240	7,610	-	-	8,280	5,330	19.6 ft
	-3 m	kg	-	-	*8 220	6 580	*5 470	3 590	-	-	*4 820	3 200	4.9 m
	-10 ft	lb	-	-	*17,740	14,150	*11,710	7,770	-	-	*10,660	7,160	16.0 ft

Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

LIFTING CAPACITY EC140EL without dozer blade

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level		1.5m, 5 ft		3.0m, 10 ft		4.5m, 15 ft		6.0m, 20 ft		Max. Reach		
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	3 100	5.4 m
Arm: 2.5m / 8'2"	20 ft	lb	-	-	-	-	*6,350	*6,350	-	-	*7,080	7,010	17.5 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 630	*3 170	2 350	6.4 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	*6,740	*6,740	*7,080	5,660	*7,000	5,250	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	3 950	*3 490	2 560	3 110	2 040	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	8,520	*7,630	5,530	6,890	4,520	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	3 720	3 810	2 470	2 960	1 930	7.1 m
	5 ft	lb	-	-	*16,030	14,450	*10,980	8,020	8,200	5,330	6,530	4,260	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	5 730	3 550	3 720	2 390	3 020	1 960	6.9 m
	0 ft	lb	-	-	*13,890	13,820	12,320	7,670	8,020	5,160	6,670	4,320	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	6 390	5 650	3 490	3 690	2 360	3 360	2 170	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	13,740	12,170	7,530	7,950	5,100	7,440	4,790	21.0 ft
	-3 m	kg	*8 940	*8 940	*8 690	6 480	5 700	3 520	-	-	4 320	2 750	5.4 m
	-10 ft	lb	*20,220	*20,220	*18,770	13,940	12,260	7,610	-	-	9,630	6,130	17.7 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	-	-	*2 860	2 650	*2 810	2 620	6.0 m
Arm: 3.0m / 9'10"	20 ft	lb	-	-	-	-	-	-	-	-	*6,250	5,890	19.6 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	-	-	*2 780	2 650	*2 640	2 070	6.9 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	-	-	*6,140	5,710	*5,830	4,610	22.7 ft
	3 m	kg	-	-	-	-	*3 440	*3 440	*3 140	2 570	*2 630	1 820	7.4 m
	10 ft	lb	-	-	-	-	*7,460	*7,460	*6,870	5,540	*5,800	4,030	24.3 ft
	1.5 m	kg	-	-	*7 320	6 830	*4 620	3 730	*3 680	2 460	2 660	1 720	7.6 m
	5 ft	lb	-	-	*15,710	14,710	*10,010	8,060	*8,020	5,300	5,870	3,800	24.9 ft
	0 m	kg	-	-	*6 510	6 400	*5 620	3 530	3 690	2 360	2 700	1 740	7.4 m
	0 ft	lb	-	-	*15,160	13,760	*12,180	7,610	7,950	5,090	5,960	3,840	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	6 290	5 600	3 430	3 630	2 310	2 960	1 900	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	13,520	12,040	7,400	7,830	4,980	6,540	4,190	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	6 340	5 600	3 430	3 660	2 330	3 620	2 310	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	13,630	12,050	7,410	-	-	8,060	5,140	19.7 ft
	-4.5 m	kg	-	-	*7 210	6 540	-	-	-	-	*4 480	3 590	4.5 m
	-15 ft	lb	-	-	*15,330	14,100	-	-	-	-	*9,920	8,210	14.4 ft

Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

Specifications.

LIFTING CAPACITY EC140EL with dozer blade

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level		1.5m, 5 ft		3.0m, 10 ft		4.5m, 15 ft		6.0m, 20 ft		Max. Reach		
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	*3 500	4.9 m
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	*7,730	15.8 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 770	6.0 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	*7,600	*7,600	-	-	*7,850	6,170	19.5 ft
	3 m	kg	-	-	*6 230	*6 230	*4 330	4 160	*3 750	2 710	*3 710	2 370	6.5 m
	10 ft	lb	-	-	*13,270	*13,270	*9,380	8,980	*8,210	5,840	*8,170	5,240	21.4 ft
	1.5 m	kg	-	-	-	-	*5 390	3 950	*4 170	2 630	*3 910	2 230	6.7 m
	5 ft	lb	-	-	-	-	*11,650	8,520	*9,100	5,670	*8,610	4,920	22.0 ft
	0 m	kg	-	-	*5 400	*5 400	*6 100	3 810	*4 520	2 560	*4 160	2 280	6.5 m
	0 ft	lb	-	-	*12,670	*12,670	*13,220	8,210	*9,820	5,530	*9,170	5,020	21.5 ft
	-1.5 m	kg	*5 010	*5 010	*9 440	6 990	*6 220	3 770	-	-	*4 470	2 560	6.0 m
	-5 ft	lb	*11,310	*11,310	*20,480	15,020	*13,490	8,130	-	-	*9,870	5,670	19.6 ft
	-3 m	kg	-	-	*8 220	7 120	*5 470	3 840	-	-	*4 820	3 410	4.9 m
	-10 ft	lb	-	-	*17,740	15,300	*11,710	8,290	-	-	*10,660	7,640	16.0 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	*3 210	5.4 m
Arm: 2.5m / 8'2"	20 ft	lb	-	-	-	-	*6,350	*6,350	-	-	*7,080	*7,080	17.5 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 790	*3 170	2 500	6.4 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	*6,740	*6,740	*7,080	6,000	*7,000	5,560	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	*3 950	*3 490	2 720	*3 160	2 170	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	*8,570	*7,630	5,870	*6,970	4,800	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	3 960	*3 970	2 620	*3 340	2 050	7.1 m
	5 ft	lb	-	-	*16,030	15,610	*10,980	8,560	*8,660	5,660	*7,360	4,520	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	*5 920	3 800	*4 400	2 540	*3 740	2 080	6.9 m
	0 ft	lb	-	-	*13,890	*13,890	*12,830	8,190	*9,560	5,490	*8,260	4,600	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	6 930	*6 220	3 730	*4 520	2 510	*4 150	2 310	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	14,880	*13,470	8,050	*9,780	5,430	*9,180	5,100	21.0 ft
	-3 m	kg	*8 940	*8 940	*8 690	7 020	*5 770	3 770	-	-	*4 510	2 930	5.4 m
	-10 ft	lb	*20,220	*20,220	*18,770	15,090	*12,430	8,140	-	-	*9,960	6,540	17.7 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	-	-	*2 860	2 810	*2 810	2 770	6.0 m
Arm: 3.0m / 9'10"	20 ft	lb	-	-	-	-	-	-	-	-	*6,250	6,240	19.6 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	-	-	*2 780	*2 780	*2 640	2 200	6.9 m
CWT: 2 100kg / 4,630lb	15 ft	lb	-	-	-	-	-	-	*6,140	6,050	*5,830	4,890	22.7 ft
	3 m	kg	-	-	-	-	*3 440	*3 440	*3 140	2 730	*2 630	1 930	7.4 m
	10 ft	lb	-	-	-	-	*7,460	*7,460	*6,870	5,880	*5,800	4,280	24.3 ft
	1.5 m	kg	-	-	*7 320	*7 320	*4 620	3 980	*3 680	2 610	*2 760	1 830	7.6 m
	5 ft	lb	-	-	*15,710	*15,710	*10,010	8,590	*8,020	5,640	*6,070	4,050	24.9 ft
	0 m	kg	-	-	*6 510	*6 510	*5 620	3 770	*4 190	2 510	*3 040	1 850	7.4 m
	0 ft	lb	-	-	*15,160	14,910	*12,180	8,140	*9,110	5,420	*6,700	4,090	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	6 820	*6 110	3 670	*4 460	2 460	*3 590	2 020	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	14,660	*13,240	7,920	*9,680	5,310	*7,960	4,470	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	6 880	*5 950	3 680	*4 160	2 480	*4 100	2 460	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	14,780	*12,860	7,940	-	-	*9,070	5,480	19.7 ft
	-4.5 m	kg	-	-	*7 210	7 090	-	-	-	-	*4 480	3 840	4.5 m
	-15 ft	lb	-	-	*15,330	15,260	-	-	-	-	*9,920	8,780	14.4 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*3 320	*3 320	-	-	*3 500	*3 500	4.9 m
Arm: 2.1m / 6'11"	20 ft	lb	-	-	-	-	*7,470	*7,470	-	-	*7,730	*7,730	15.8 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 470	*3 470	-	-	*3 570	2 930	6.0 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	*7,600	*7,600	-	-	*7,850	6,540	19.5 ft
	3 m	kg	-	-	*6 230	*6 230	*4 330	*4 330	*3 750	2 870	*3 710	2 520	6.5 m
	10 ft	lb	-	-	*13,270	*13,270	*9,380	*9,380	*8,210	6,200	*8,170	5,570	21.4 ft
	1.5 m	kg	-	-	-	-	*5 390	4 180	*4 170	2 790	*3 910	2 370	6.7 m
	5 ft	lb	-	-	-	-	*11,650	9,030	*9,100	6,020	*8,610	5,240	22.0 ft
	0 m	kg	-	-	*5 400	*5 400	*6 100	4 040	*4 520	2 730	*4 160	2 420	6.5 m
	0 ft	lb	-	-	*12,670	*12,670	*13,220	8,730	*9,820	5,890	*9,170	5,350	21.5 ft
	-1.5 m	kg	*5 010	*5 010	*9 440	7 420	*6 220	4 010	-	-	*4 470	2 730	6.0 m
	-5 ft	lb	*11,310	*11,310	*20,480	15,950	*13,490	8,640	-	-	*9,870	6,040	19.6 ft
	-3 m	kg	-	-	*8 220	7 550	*5 470	4 070	-	-	*4 820	3 630	4.9 m
	-10 ft	lb	-	-	*17,740	16,230	*11,710	8,810	-	-	*10,660	8,110	16.0 ft

Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

LIFTING CAPACITY EC140EL with dozer blade

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level		1.5m, 5 ft		3.0m, 10 ft		4.5m, 15 ft		6.0m, 20 ft		Max. Reach		
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	*2 840	*2 840	-	-	*3 210	*3 210	5.4 m
Arm: 2.5m / 8'2"	20 ft	lb	-	-	-	-	*6,350	*6,350	-	-	*7,080	*7,080	17.5 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	*3 080	*3 080	*3 190	2 950	*3 170	2 650	6.4 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	*6,740	*6,740	*7,080	6,350	*7,000	5,900	20.9 ft
	3 m	kg	-	-	*5 330	*5 330	*3 950	*3 950	*3 490	2 890	*3 160	2 310	6.9 m
	10 ft	lb	-	-	*11,370	*11,370	*8,570	*8,570	*7,630	6,220	*6,970	5,110	22.7 ft
	1.5 m	kg	-	-	-	-	*5 070	4 200	*3 970	2 790	*3 340	2 180	7.1 m
	5 ft	lb	-	-	*16,030	*16,030	*10,980	9,070	*8,660	6,020	*7,360	4,820	23.3 ft
	0 m	kg	-	-	*5 970	*5 970	*5 920	4 040	*4 400	2 710	*3 740	2 220	6.9 m
	0 ft	lb	-	-	*13,890	*13,890	*12,830	8,710	*9,560	5,850	*8,260	4,900	22.7 ft
	-1.5 m	kg	*4 550	*4 550	*9 610	7 360	*6 220	3 970	*4 520	2 680	*4 150	2 460	6.4 m
	-5 ft	lb	*10,250	*10,250	*20,840	15,800	*13,470	8,570	*9,780	5,790	*9,180	5,440	21.0 ft
	-3 m	kg	*8 940	*8 940	*8 690	7 450	*5 770	4 010	-	-	*4 510	3 120	5.4 m
	-10 ft	lb	*20,220	*20,220	*18,770	16,010	*12,430	8,650	-	-	*9,960	6,950	17.7 ft
Boom: 4.6m / 15'1"	6 m	kg	-	-	-	-	-	-	*2 860	*2 860	*2 810	*2 810	6.0 m
Arm: 3.0m / 9'10"	20 ft	lb	-	-	-	-	-	-	-	-	*6,250	*6,250	19.6 ft
Shoe: 600mm / 24"	4.5 m	kg	-	-	-	-	-	-	*2 780	*2 780	*2 640	2 330	6.9 m
CWT: 2 450kg / 5,400lb	15 ft	lb	-	-	-	-	-	-	*6,140	*6,140	*5,830	5,190	22.7 ft
	3 m	kg	-	-	-	-	*3 440	*3 440	*3 140	2 890	*2 630	2 060	7.4 m
	10 ft	lb	-	-	-	-	*7,460	*7,460	*6,870	6,230	*5,800	4,560	24.3 ft
	1.5 m	kg	-	-	*7 320	*7 320	*4 620	4 220	*3 680	2 780	*2 760	1 960	7.6 m
	5 ft	lb	-	-	*15,710	*15,710	*10,010	9,110	*8,020	5,990	*6,070	4,320	24.9 ft
	0 m	kg	-	-	*6 510	*6 510	*5 620	4 010	*4 190	2 680	*3 040	1 980	7.4 m
	0 ft	lb	-	-	*15,160	*15,160	*12,180	8,660	*9,110	5,780	*6,700	4,370	24.4 ft
	-1.5 m	kg	*3 990	*3 990	*8 760	7 250	*6 110	3 910	*4 460	2 620	*3 590	2 160	6.9 m
	-5 ft	lb	*8,970	*8,970	*20,130	15,580	*13,240	8,440	*9,680	5,670	*7,960	4,770	22.7 ft
	-3 m	kg	*7 370	*7 370	*9 080	7 310	*5 950	3 920	*4 160	2 650	*4 100	2 620	6.0 m
	-10 ft	lb	*16,640	*16,640	*19,640	15,700	*12,860	8,450	-	-	*9,070	5,840	19.7 ft
	-4.5 m	kg	-	-	*7 210	*7 210	-	-	-	-	*4 480	4 080	4.5 m
	-15 ft	lb	-	-	*15,330	*15,330	-	-	-	-	*9,920	9,330	14.4 ft

Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.