

Volvo EC140E in detail

Engine

The latest generation, Volvo engine Tier 4f / Stage IV emissions compliant diesel engine fully meets the demands of the latest, emissions 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/min	2 000
Net, ISO 9249/SAE J1349	kW	89
	hp	121
Gross, ISO 14396/SAE J1995	kW	90
	hp	122
Max torque	Nm	566
at engine speed	r/min	1 500
No. of cylinders		4
Displacement	l	4.04
Bore	mm	101
Stroke	mm	126

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	2 x 12
Battery capacity	Ah	100
Alternator	V/A	28/80
Start motor	V - kW	24 - 5.5

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	13
Max. slew torque	kNm	39

Travel System

Each track is powered by an automatic two-speed shift travel

EC140EL

Max. drawbar pull	kN	119
Max. travel speed (low)	km/h	3.1
Max. travel speed (high)	km/h	5.5
Gradeability	°	35

EC140ELM

Max. drawbar pull	kN	140
Max. travel speed (low)	km/h	2.6
Max. travel speed (high)	km/h	4.5
Gradeability	°	35

Undercarriage

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

EC140EL

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

EC140ELM

Track shoe		2 x 42
Link pitch	mm	190
Shoe width, triple grouser	mm	600 / 700 / 800 / 900
Bottom rollers		2 x 6
Top rollers		2 x 2

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	2 x 124
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Pilot pump. Type: Gear pump

Maximum flow	l/min	1 x 20
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Relief valve setting pressure

Implement	MPa	32.4 / 34.3
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Travel circuit	MPa	34.3
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Slew circuit	MPa	24.5
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Pilot circuit	MPa	3.9
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Travel: Variable displacement axial piston motor with mechanical brake

Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic Cylinders

Mono boom		2
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Bore x Stroke	ø x mm	105 x 980
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2 piece boom		1
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Bore x Stroke	ø x mm	160 x 765
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Arm		1
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Bore x Stroke	ø x mm	120 x 1 045
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Bucket		1
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Bore x Stroke	ø x mm	100 x 865
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Dozer blade		2
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Bore x Stroke	ø x mm	130 x 270
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Service Refill

Fuel tank	l	250
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DEF/AdBlue® tank	l	20
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Hydraulic system, total	l	230
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Hydraulic tank	l	85
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Engine oil	l	16
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Engine coolant	l	28
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Slew reduction unit	l	3.9
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Travel reduction unit	l	2 x 2.2
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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 level in cab according to ISO 6396

LpA (standard)	dB(A)	69
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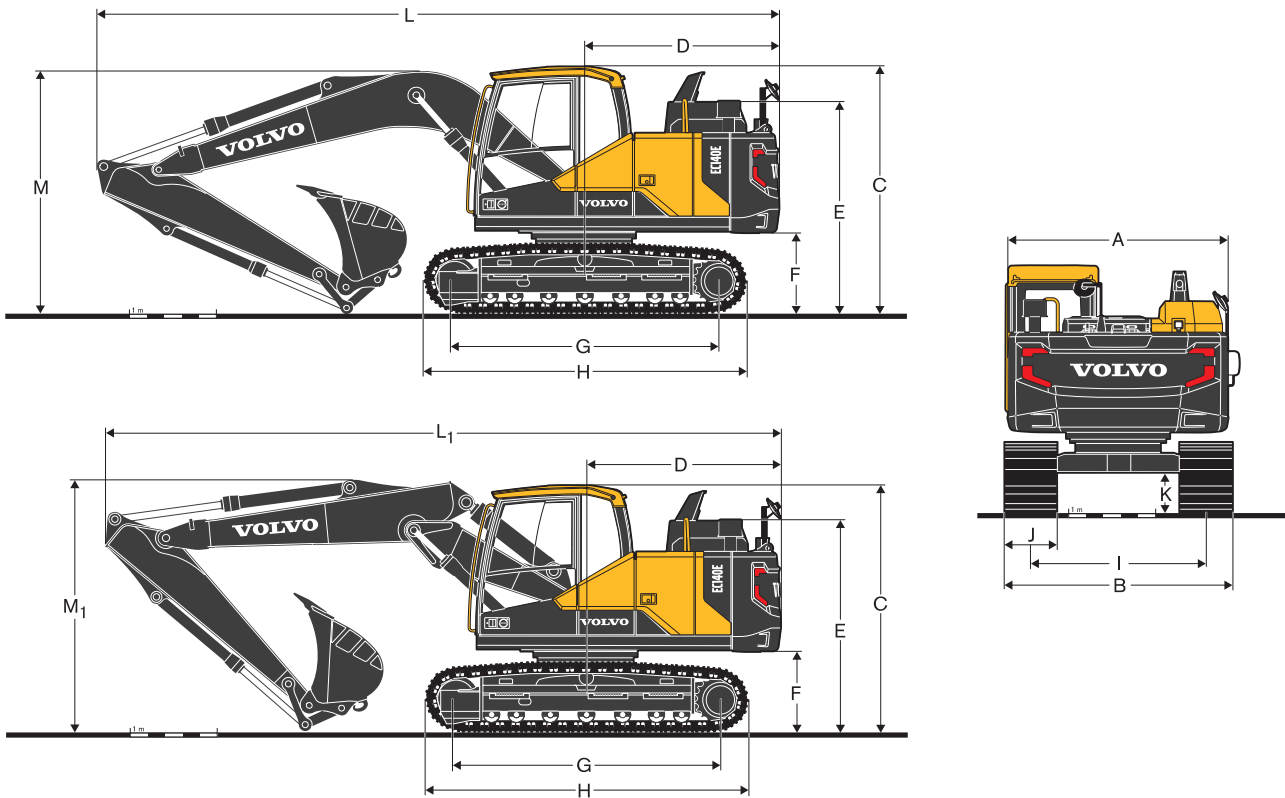
LpA (tropical)	dB(A)	70
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External sound level according to ISO 6395, EU Noise Directive (2000/14/EC)

LwA (standard)	dB(A)	100
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LwA (tropical)	dB(A)	101
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Specifications

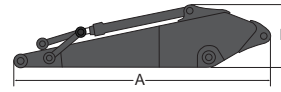
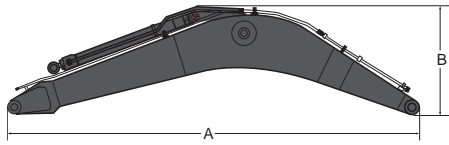


DIMENSIONS

Description	Unit	EC140EL			EC140ELM		
Boom	m	4.6 mono or 4.6 2-piece			4.6 mono or 4.6 2-piece		
Arm	m	2.1	2.5	3.0	2.1	2.5	3.0
A Overall width of upper structure	mm	2 490	2 490	2 490	2 490	2 490	2 490
B Overall width	mm	2 590	2 590	2 590	2 690	2 690	2 690
C Overall height of cab	mm	2 800	2 800	2 800	2 994	2 994	2 994
D Tail swing radius	mm	2 200	2 200	2 200	2 200	2 200	2 200
E Overall height of engine hood	mm	2 400	2 400	2 400	2 590	2 590	2 590
F Counterweight clearance*	mm	920	920	920	1 113	1 113	1 113
G Tumbler length	mm	3 040	3 040	3 040	3 000	3 000	3 000
H Track length	mm	3 760	3 760	3 760	3 790	3 790	3 790
I Track gauge	mm	1 990	1 990	1 990	1 990	1 990	1 990
J Shoe width	mm	600	600	600	700	700	700
K Min. ground clearance*	mm	436	436	436	580	580	580
L Overall length	mm	7 720	7 720	7 650	7 690	7 720	7 690
L1 Overall length	mm	7 700	7 660	7 560	7 700	7 690	7 640
M Overall height of boom	mm	2 710	2 830	3 210	2 780	2 900	3 210
M1 Overall height of boom	mm	2 720	2 860	3 310	2 820	2 950	3 280
Guardrail	mm	-	-	-	3 130	3 130	3 130

* Without shoe grouser

1 2-piece boom

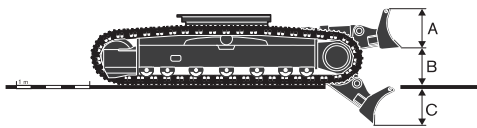


DIMENSIONS

Description	Unit	mono	2-piece	Description	Unit	2.1	2.5	3.0
Boom	m	4.6	4.6	Arm	m			
Length (A)	mm	4 770	4 765	Length (A)	mm	2 800	3 200	2 700
Height (B)	mm	1 370	1 225	Height (B)	mm	710	710	780
Width	mm	545	545	Width	mm	300	300	300
Weight	kg	1 100	1 900	Weight	kg	555	625	685

* Includes cylinder, piping and pin, excludes boom cyl. Pin

* Includes cylinder, linkage and pin



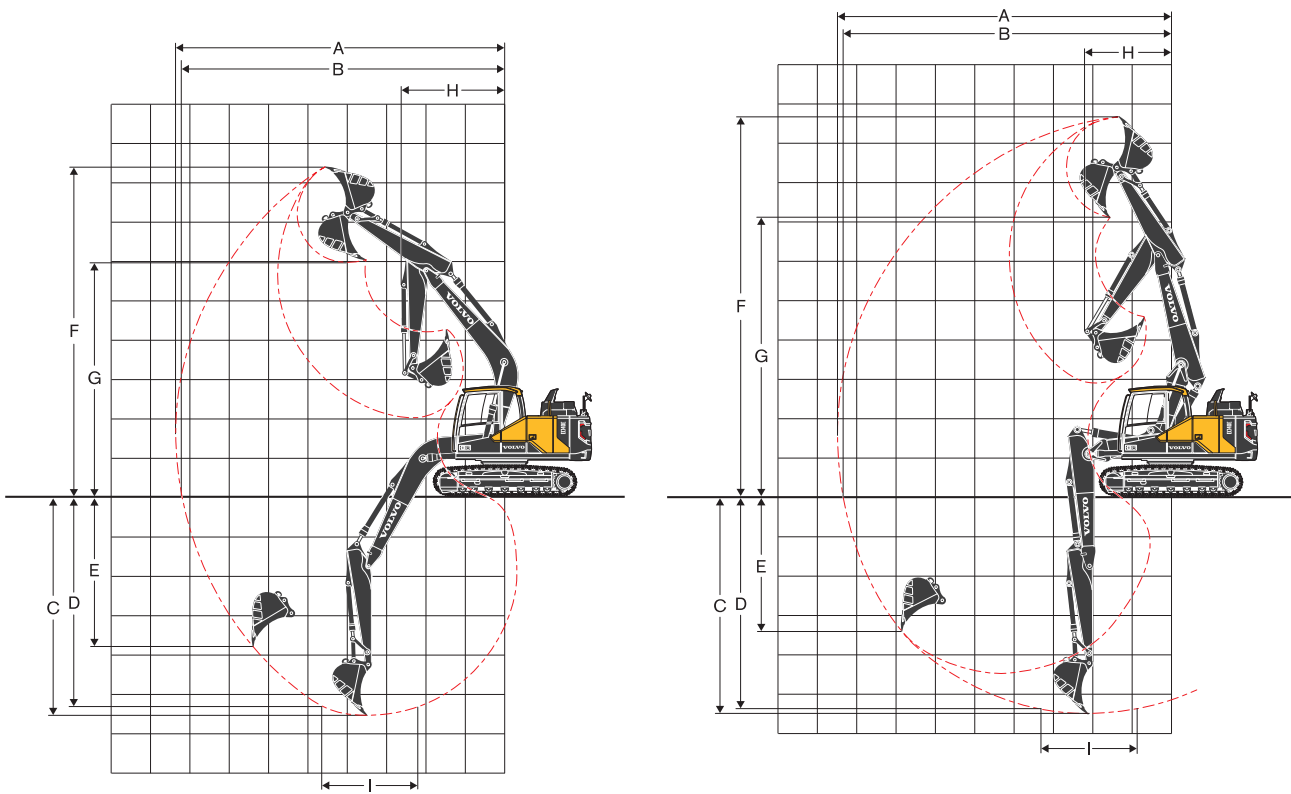
DIMENSIONS

Description	Unit	
Front dozer blade		
Height (A)	mm	580
Width	mm	2 590
Weight	kg	458
Lift height (B)	mm	480
Digging depth (C)	mm	600

MACHINE WEIGHTS AND GROUND PRESSURE

Description	Shoe width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width
	mm	kg	kPa	mm	kg	kPa	mm
	EC140EL						
		4.6m boom, 2.5m arm, 403kg / 540l bucket, 2 450kg counterweight			4.6m 2-piece boom, 2.5m arm, 403kg / 540l bucket, 2 450kg counterweight		
Triple grouser	500	14 390	43.1	2 490	14 810	44.1	2 490
	600	14 590	36.3	2 590	15 010	37.3	2 590
	700	14 790	31.4	2 690	15 210	32.4	2 690
	750	14 970	29.4	2 740	15 390	30.4	2 740
Triple grouser HD	600	14 660	36.3	2 590	15 080	37.3	2 590
Rubber grouser	500	14 430	42.2	2 490	14 850	44.1	2 490
	EC140EL with dozer blade						
		4.6m boom, 2.5m arm, 403kg / 540l bucket, 2 450kg counterweight			4.6m 2-piece boom, 2.5m arm, 403kg / 540l bucket, 2 450kg counterweight		
Triple grouser	500	15 330	46.1	2 490	15 750	47.1	2 490
	600	15 530	38.2	2 590	15 950	39.2	2 590
	700	15 730	33.3	2 690	16 150	34.3	2 690
	750	15 910	31.4	2 740	16 330	32.4	2 740
Triple grouser HD	600	15 600	38.2	2 590	16 020	40.2	2 590
Rubber grouser	500	15 370	45.1	2 490	15 790	47.1	2 490
	EC140ELM						
		4.6m boom, 2.5m arm, 403kg / 540l bucket, 2 450kg counterweight			4.6m 2-piece boom, 2.5m arm, 403kg / 540l bucket, 2 450kg counterweight		
Triple grouser	600	15 780	39.2	2 590	16 200	40.2	2 590
	700	15 990	34.3	2 690	16 410	35.3	2 690
	800	16 410	30.4	2 790	16 830	31.4	2 790
	900	16 650	27.5	2 890	17 070	28.4	2 890

Specifications



WORKING RANGES

Description	Unit	EC140EL						EC140ELM					
		4.6 mono			4.6 2-piece			4.6 mono			4.6 2-piece		
Boom	m	2.1	2.5	3.0	2.1	2.5	3.0	2.1	2.5	3.0	2.1	2.5	3.0
A Max. digging reach	mm	7 980	8 360	8 850	8 080	8 460	8 960	7 980	8 360	8 850	8 080	8 460	8 960
B Max. digging reach on ground	mm	7 840	8 220	8 720	7 930	8 320	8 830	7 800	8 180	8 680	7 890	8 290	8 790
C Max. digging depth	mm	5 160	5 560	6 060	5 080	5 480	5 980	4 960	5 360	5 860	4 890	5 280	5 790
D Max. digging depth (l = 2.44m level)	mm	4 900	5 340	5 880	4 960	5 360	5 870	4 710	5 140	5 680	4 760	5 170	5 680
E Max. vertical wall digging depth	mm	3 970	4 330	4 870	3 970	4 340	4 830	3 770	4 140	4 670	3 780	4 140	4 630
F Max. cutting height	mm	8 120	8 360	8 710	9 270	9 630	10 110	8 320	8 550	8 910	9 470	9 830	10 300
G Max. dumping height	mm	5 720	5 950	6 290	6 730	7 100	7 570	5 910	6 150	6 490	6 930	7 290	7 770
H Min. front swing radius	mm	2 570	2 630	2 740	1 740	1 990	2 410	2 570	2 630	2 740	1 740	1 990	2 410

Digging forces with direct fit bucket

Bucket radius		mm	1 274	1 274	1 274	1 274	1 274	1 274	1 274	1 274	1 274	1 274	1 274	1 274
Breakout force -bucket	Normal	SAE J1179	kN	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5	80.5
	Power boost	SAE J1179	kN	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4
	Normal	ISO 6015	kN	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1	91.1
	Power boost	ISO 6015	kN	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
Tearout force -dipper arm	Normal	SAE J1179	kN	69.6	62.1	55.2	69.6	62.1	55.2	69.6	62.1	55.2	69.6	62.1
	Power boost	SAE J1179	kN	73.8	65.9	58.6	73.8	65.9	58.6	73.8	65.9	58.6	73.8	65.9
	Normal	ISO 6015	kN	71.5	63.5	56.3	71.5	63.5	56.3	71.5	63.5	56.3	71.5	63.5
	Power boost	ISO 6015	kN	75.8	67.4	59.7	75.8	67.4	59.7	75.8	67.4	59.7	75.8	67.4
Rotation angle, bucket		°	175	175	175	175	175	175	175	175	175	175	175	175

BUCKET SELECTION GUIDE

Bucket type			Capacity	Cutting width	Weight	Teeth	EC140EL							
							4.6m boom			4.6m 2-piece boom				
			600mm shoe, 2 450kg counterweight						2.1m arm	2.5m arm	3.0m arm	2.1m arm	2.5m arm	3.0m arm
			L	mm	kg	EA								
Direct fit buckets	Without quick coupler	General purpose	660	1 050	443	4	C	C	C	C	C	C		
			770	1 200	504	5	C	C	C	C	C	C		
			250	450	293	3	C	C	C	C	C	C		
			330	600	324	3	C	C	C	C	C	C		
			420	750	355	3	C	C	C	C	C	C		
	540	900	403	4	C	C	C	C	C	C				
	U type quick coupler	General purpose	660	1 050	443	4	C	C	C	C	C	C		
			770	1 200	504	5	C	C	B	C	C	B		
			250	450	293	3	C	C	C	C	C	C		
			330	600	324	3	C	C	C	C	C	C		
420			750	355	3	C	C	C	C	C	C			
Quick coupler buckets	S-quick coupler	General purpose	660	1 050	446	4	C	C	C	C	C	C		
			770	1 200	508	5	C	C	C	C	C	B		
			330	600	327	3	C	C	C	C	C	C		
			420	750	357	3	C	C	C	C	C	C		
			540	900	406	4	C	C	C	C	C	C		

Bucket type			Capacity	Cutting width	Weight	Teeth	EC140ELM							
							4.6m boom			4.6m 2-piece boom				
			700mm shoe, 2 450kg counterweight						2.1m arm	2.5m arm	3.0m arm	2.1m arm	2.5m arm	3.0m arm
			L	mm	kg	EA								
Direct fit buckets	Without quick coupler	General purpose	660	1 050	443	4	C	C	C	C	C	C		
			770	1 200	504	5	C	C	C	C	C	C		
			250	450	293	3	C	C	C	C	C	C		
			330	600	324	3	C	C	C	C	C	C		
			420	750	355	3	C	C	C	C	C	C		
	540	900	403	4	C	C	C	C	C	C				
	U type quick coupler	General purpose	660	1 050	443	4	C	C	C	C	C	C		
			770	1 200	504	5	C	C	C	C	C	C		
			250	450	293	3	C	C	C	C	C	C		
			330	600	324	3	C	C	C	C	C	C		
420			750	355	3	C	C	C	C	C	C			
Quick coupler buckets	S-quick coupler	General purpose	660	1 050	446	4	C	C	C	C	C	C		
			770	1 200	508	5	C	C	C	C	C	C		
			330	600	327	3	C	C	C	C	C	C		
			420	750	357	3	C	C	C	C	C	C		
			540	900	406	4	C	C	C	C	C	C		

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 material density

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

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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach				
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m		
Boom :	4.6m	6.0 m	kg					*3 320	*3 320					*3 500	*3 500	4.9
Arm :	2.1m	4.5 m	kg					*3 470	*3 470					*3 570	2930	6.0
Shoe :	600mm	3.0 m	kg			*6 230	*6 230	*4 330	*4 330	*3 750	2870			*3 710	2520	6.5
CWT :	2 450kg	1.5 m	kg					*5 390	4180	*4 170	2790			*3 910	2370	6.7
		0.0 m	kg			*5 400	*5 400	*6 100	4040	*4 520	2730			*4 160	2420	6.5
		-1.5 m	kg	*5 010	*5 010	*9 440	7420	*6 220	4010					*4 470	2730	6.0
		-3.0 m	kg			*8 220	7550	*5 470	4070					*4 820	3630	4.9
Boom :	4.6m	6.0 m	kg					*2 840	*2 840					*3 210	*3 210	5.4
Arm :	2.5m	4.5 m	kg					*3 080	*3 080	*3 190	2950			*3 170	2650	6.4
Shoe :	600mm	3.0 m	kg			*5 330	*5 330	*3 950	*3 950	*3 490	2890			*3 160	2310	6.9
CWT :	2 450kg	1.5 m	kg					*5 070	4200	*3 970	2790			*3 340	2180	7.1
		0.0 m	kg			*5 970	*5 970	*5 920	4040	*4 400	2710			*3 740	2220	6.9
		-1.5 m	kg	*4 550	*4 550	*9 610	7360	*6 220	3970	*4 520	2680			*4 150	2460	6.4
		-3.0 m	kg	*8 940	*8 940	*8 690	7450	*5 770	4010					*4 510	3120	5.4
Boom :	4.6m	7.5 m	kg											*2 870	*2 870	4.5
Arm :	3.0m	6.0 m	kg							*2 860	*2 860			*2 810	*2 810	6.0
Shoe :	600mm	4.5 m	kg							*2 780	*2 780			*2 640	2330	6.9
CWT :	2 450kg	3.0 m	kg					*3 440	*3 440	*3 140	2890			*2 630	2060	7.4
		1.5 m	kg			*7 320	*7 320	*4 620	4220	*3 680	2780	*3 110	1990	*2 760	1960	7.6
		0.0 m	kg			*6 510	*6 510	*5 620	4010	*4 190	2680			*3 040	1980	7.4
		-1.5 m	kg	*3 990	*3 990	*8 760	7250	*6 110	3910	*4 460	2620			*3 590	2160	6.9
		-3.0 m	kg	*7 370	*7 370	*9 080	7310	*5 950	3920	*4 160	2650			*4 100	2620	6.0
		-4.5 m	kg			*7 210	*7 210							*4 480	4080	4.5
Boom :	4.6m 2-piece	7.5 m	kg											*5 580	*5 580	2.9
Arm :	2.1m	6.0 m	kg			*5 070	*5 070	*4 800	4670					*3 980	3890	5.0
Shoe :	600mm	4.5 m	kg			*5 470	*5 470	*4 950	4620	*4 100	2930			*3 580	2860	6.1
CWT :	2 450kg	3.0 m	kg					*5 740	4420	*4 700	2880			*3 510	2460	6.6
		1.5 m	kg					*6 600	4190	*4 980	2790			*3 650	2330	6.8
		0.0 m	kg					*6 940	4040	*5 060	2720			*4 050	2380	6.6
		-1.5 m	kg			*9 290	7420	*6 480	4000	*4 440	2720			*4 300	2670	6.1
Boom :	4.6m 2-piece	7.5 m	kg			*5 180	*5 180							*4 160	*4 160	3.8
Arm :	2.5m	6.0 m	kg			*4 390	*4 390	*4 320	*4 320					*3 210	*3 210	5.5
Shoe :	600mm	4.5 m	kg			*4 120	*4 120	*4 560	*4 560	*4 230	2970			*2 930	2580	6.5
CWT :	2 450kg	3.0 m	kg					*5 390	4470	*4 480	2900			*2 870	2260	7.0
		1.5 m	kg					*6 360	4210	*4 850	2790			*2 970	2140	7.2
		0.0 m	kg					*6 880	4030	*5 040	2710			*3 250	2180	7.0
		-1.5 m	kg			*9 130	7350	*6 650	3970	*4 740	2680			*3 820	2410	6.5
		-3.0 m	kg					*5 410	4010							5.5
Boom :	4.6m 2-piece	7.5 m	kg			*4 120	*4 120	*3 610	*3 610					*3 250	*3 250	4.6
Arm :	3.0m	6.0 m	kg					*3 750	*3 750	*3 160	2990			*2 660	*2 660	6.2
Shoe :	600mm	4.5 m	kg			*3 000	*3 000	*3 780	*3 780	*3 850	2990			*2 450	2270	7.1
CWT :	2 450kg	3.0 m	kg					*4 890	4520	*4 170	2910	*2 550	2030	*2 400	2010	7.5
		1.5 m	kg					*5 980	4240	*4 620	2780	*3 330	1990	*2 470	1910	7.7
		0.0 m	kg					*6 710	4010	*4 940	2680	*2 880	1950	*2 660	1940	7.5
		-1.5 m	kg	*3 630	*3 630	*8 260	7240	*6 740	3910	*4 870	2620			*3 070	2110	7.1
		-3.0 m	kg			*8 660	7300	*5 900	3910	*3 900	2650			*3 580	2560	6.2

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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach				
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m		
Boom :	4.6m	6.0 m	kg					*3 320	*3 320					*3 500	*3 500	4.9
Arm :	2.1m	4.5 m	kg					*3 470	*3 470					*3 570	2920	6.0
Shoe :	500mm	3.0 m	kg			*6 230	*6 230	*4 330	*4 330	*3 750	2860			*3 710	2500	6.5
CWT :	2 450kg	1.5 m	kg					*5 390	4160	*4 170	2770			*3 910	2360	6.7
		0.0 m	kg			*5 400	*5 400	*6 100	4020	*4 520	2710			*4 160	2410	6.5
		-1.5 m	kg	*5 010	*5 010	*9 440	7380	*6 220	3980					*4 470	2710	6.0
		-3.0 m	kg			*8 220	7500	*5 470	4050					*4 820	3600	4.9
Boom :	4.6m	6.0 m	kg					*2 840	*2 840					*3 210	*3 210	5.4
Arm :	2.5m	4.5 m	kg					*3 080	*3 080	*3 190	2930			*3 170	2630	6.4
Shoe :	500mm	3.0 m	kg			*5 330	*5 330	*3 950	*3 950	*3 490	2870			*3 160	2290	6.9
CWT :	2 450kg	1.5 m	kg					*5 070	4180	*3 970	2770			*3 340	2170	7.1
		0.0 m	kg			*5 970	*5 970	*5 920	4010	*4 400	2690			*3 740	2210	6.9
		-1.5 m	kg	*4 550	*4 550	*9 610	7310	*6 220	3950	*4 520	2660			*4 150	2440	6.4
		-3.0 m	kg	*8 940	*8 940	*8 690	7400	*5 770	3980					*4 510	3100	5.4
Boom :	4.6m	7.5 m	kg											*2 870	*2 870	4.5
Arm :	3.0m	6.0 m	kg							*2 860	*2 860			*2 810	*2 810	6.0
Shoe :	500mm	4.5 m	kg							*2 780	*2 780			*2 640	2320	6.9
CWT :	2 450kg	3.0 m	kg					*3 440	*3 440	*3 140	2870			*2 630	2050	7.4
		1.5 m	kg			*7 320	*7 320	*4 620	4200	*3 680	2760	*3 110	1980	*2 760	1940	7.6
		0.0 m	kg			*6 510	*6 510	*5 620	3990	*4 190	2660			*3 040	1970	7.4
		-1.5 m	kg	*3 990	*3 990	*8 760	7210	*6 110	3890	*4 460	2610			*3 590	2140	6.9
		-3.0 m	kg	*7 370	*7 370	*9 080	7260	*5 950	3890	*4 160	2630			*4 100	2610	6.0
		-4.5 m	kg			*7 210	*7 210							*4 480	4050	4.5
Boom :	4.6m 2-piece	7.5 m	kg											*5 580	*5 580	2.9
Arm :	2.1m	6.0 m	kg			*5 070	*5 070	*4 800	4650					*3 980	3870	5.0
Shoe :	500mm	4.5 m	kg			*5 470	*5 470	*4 950	4600	*4 100	2910			*3 580	2850	6.1
CWT :	2 450kg	3.0 m	kg					*5 740	4400	*4 700	2860			*3 510	2450	6.6
		1.5 m	kg					*6 600	4160	*4 980	2770			*3 650	2310	6.8
		0.0 m	kg					*6 940	4020	*5 060	2710			*4 050	2360	6.6
		-1.5 m	kg			*9 290	7370	*6 480	3980	*4 440	2700			*4 300	2660	6.1
Boom :	4.6m 2-piece	7.5 m	kg			*5 180	*5 180							*4 160	*4 160	3.8
Arm :	2.5m	6.0 m	kg			*4 390	*4 390	*4 320	*4 320					*3 210	*3 210	5.5
Shoe :	500mm	4.5 m	kg			*4 120	*4 120	*4 560	*4 560	*4 230	2950			*2 930	2570	6.5
CWT :	2 450kg	3.0 m	kg					*5 390	4440	*4 480	2880			*2 870	2240	7.0
		1.5 m	kg					*6 360	4190	*4 850	2780			*2 970	2120	7.2
		0.0 m	kg					*6 880	4010	*5 040	2690			*3 250	2160	7.0
		-1.5 m	kg			*9 130	7300	*6 650	3940	*4 740	2660			*3 820	2390	6.5
		-3.0 m	kg					*5 410	3980							5.5
Boom :	4.6m 2-piece	7.5 m	kg			*41 20	*4 120	*3 610	*3 610					*3 250	*3 250	4.6
Arm :	3.0m	6.0 m	kg					*3 750	*3 750	*3 160	2970			*2 660	*2 660	6.2
Shoe :	500mm	4.5 m	kg			*3 000	*3 000	*3 780	*3 780	*3 850	2980			*2 450	2260	7.1
CWT :	2 450kg	3.0 m	kg					*4 890	4490	*4 170	2890	*2 550	2010	*2 400	2000	7.5
		1.5 m	kg					*5 980	4210	*4 620	2770	*3 330	1980	*2 470	1900	7.7
		0.0 m	kg					*6 710	3990	*4 940	2660	*2 880	1940	*2 660	1930	7.5
		-1.5 m	kg	*3 630	*3 630	*8 260	7200	*6 740	3880	*4 870	2600			*3 070	2100	7.1
		-3.0 m	kg			*8 660	7260	*5 900	3890	*3 900	2630			*3 580	2540	6.2

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 (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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach				
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m		
Boom :	4.6m	6.0 m	kg					*3 320	*3 320					*3 500	*3 500	4.9
Arm :	2.1m	4.5 m	kg					*3 470	*3 470					*3 570	2610	6.0
Shoe :	600mm	3.0 m	kg			*6 230	*6 230	*4 330	3910	*3 750	2550			3400	2230	6.5
CWT :	2 450kg	1.5 m	kg					*5 390	3700	3800	2470			3220	2100	6.7
		0.0 m	kg			*5 400	*5 400	5730	3560	3730	2410			3300	2140	6.5
		-1.5 m	kg	*5 010	*5 010	*9 440	6460	5690	3520					3740	2410	6.0
		-3.0 m	kg			*8 220	6580	*5 470	3590					*4 820	3200	4.9
Boom :	4.6m	6.0 m	kg					*2 840	*2 840					*3 210	3100	5.4
Arm :	2.5m	4.5 m	kg					*3 080	*3 080	*3 190	2630			*3 170	2350	6.4
Shoe :	600mm	3.0 m	kg			*5 330	*5 330	*3 950	3950	*3 490	2560			3110	2040	6.9
CWT :	2 450kg	1.5 m	kg					*5 070	3720	3810	2470			2960	1930	7.1
		0.0 m	kg			*5 970	*5 970	5730	3550	3720	2390			3020	1960	6.9
		-1.5 m	kg	*4 550	*4 550	*9 610	6390	5650	3490	3690	2360			3360	2170	6.4
		-3.0 m	kg	*8 940	*8 940	*8 690	6480	5700	3520					4320	2750	5.4
Boom :	4.6m	7.5 m	kg											*2 870	*2 870	4.5
Arm :	3.0m	6.0 m	kg							*2 860	2650			*2 810	2620	6.0
Shoe :	600mm	4.5 m	kg							*2 780	2650			*2 640	2070	6.9
CWT :	2 450kg	3.0 m	kg					*3 440	*3 440	*3 140	2570			*2 630	1820	7.4
		1.5 m	kg			*7 320	6830	*4 620	3730	*3 680	2460	2700	1750	2660	1720	7.6
		0.0 m	kg			*6 510	6400	*5 620	3530	3690	2360			2700	1740	7.4
		-1.5 m	kg	*3 990	*3 990	*8 760	6290	5600	3430	3630	2310			2960	1900	6.9
		-3.0 m	kg	*7 370	*7 370	*9 080	6340	5600	3430	3660	2330			3620	2310	6.0
		-4.5 m	kg			*7 210	6540							*4 480	3590	4.5
Boom :	4.6m 2-piece	7.5 m	kg											*5 580	*5 580	2.9
Arm :	2.1m	6.0 m	kg			*5 070	*5 070	*4 800	4170					*3 980	3470	5.0
Shoe :	600mm	4.5 m	kg			*5 470	*5 470	*4 950	4120	3980	2600			*3 580	2540	6.1
CWT :	2 450kg	3.0 m	kg					*5 740	3930	3930	2560			3350	2180	6.6
		1.5 m	kg					5930	3700	3830	2470			3170	2050	6.8
		0.0 m	kg					5760	3550	3750	2400			3260	2100	6.6
		-1.5 m	kg			*9 290	6440	5720	3520	3750	2400			3680	2360	6.1
Boom :	4.6m 2-piece	7.5 m	kg			*5 180	*5 180							*4 160	*4 160	3.8
Arm :	2.5m	6.0 m	kg			*4 390	*4 390	*4 320	4250					*3 210	2990	5.5
Shoe :	600mm	4.5 m	kg			*4 120	*4 120	*4 560	4170	4020	2640			*2 930	2290	6.5
CWT :	2 450kg	3.0 m	kg					*5 390	3970	3940	2570			*2 870	1990	7.0
		1.5 m	kg					5960	3720	3830	2470			2910	1880	7.2
		0.0 m	kg					5760	3550	3740	2380			2980	1920	7.0
		-1.5 m	kg			*9 130	6380	5680	3480	3700	2350			3310	2120	6.5
		-3.0 m	kg					*5 410	3520							5.5
Boom :	4.6m 2-piece	7.5 m	kg			*4 120	*4 120	*3 610	*3 610					*3 250	*3 250	4.6
Arm :	3.0m	6.0 m	kg					*3 750	*3 750	*3 160	2660			*2 660	2530	6.2
Shoe :	600mm	4.5 m	kg			*3 000	*3 000	*3 780	*3 780	*3 850	2670			*2 450	2010	7.1
CWT :	2 450kg	3.0 m	kg					*4 890	4020	3960	2580	*2 550	1790	*2 400	1770	7.5
		1.5 m	kg					*5 980	3740	3830	2460	2720	1750	*2 470	1680	7.7
		0.0 m	kg					5750	3530	3710	2350	2680	1710	*2 660	1700	7.5
		-1.5 m	kg	*3 630	*3 630	*8 260	6270	5630	3420	3650	2300			2910	1850	7.1
		-3.0 m	kg			*8 660	6330	5630	3430	3680	2330			3550	2250	6.2

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 EC140ELM (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	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		Max. reach				
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m		
Boom :	4.6m	6.0 m	kg					*3 280	*3 280					*3 500	*3 500	5.1
Arm :	2.1m	4.5 m	kg					*3 550	*3 550	*3 560	2840			*3 580	2780	6.1
Shoe :	700mm	3.0 m	kg			*6 660	*6 660	*4 470	4230	*3 800	2780			3630	2420	6.6
CWT :	2 450kg	1.5 m	kg					*5 510	4020	4100	2700			3470	2300	6.7
		0 m	kg			*5 920	*5 920	*6 150	3890	4030	2640			3610	2380	6.5
		-1.5 m	kg	*5 680	*5 680	*9 340	7080	6130	3870					4150	2710	5.9
		-3.0 m	kg			*7 960	7210	*5 240	3960					*4 870	3720	4.7
Boom :	4.6m	6.0 m	kg					*2 820	*2 820					*3 220	*3 220	5.6
Arm :	2.5m	4.5 m	kg					*3 160	*3 160	*3 210	2860			*3 160	2520	6.5
Shoe :	700mm	3.0 m	kg			*5 740	*5 740	*4 090	*4 090	*3 540	2790			*3 180	2220	7.0
CWT :	2 450kg	1.5 m	kg					*5 210	4030	*4 040	2700			3200	2120	7.1
		0 m	kg			*6 280	*6 280	*5 990	3880	4010	2620			3300	2180	6.9
		-1.5 m	kg	*5 050	*5 050	*9 550	7010	6090	3830	3990	2600			3720	2440	6.3
		-3.0 m	kg	*9 660	*9 660	*8 480	7110	*5 630	3880					*4 550	3160	5.3
Boom :	4.6m	7.5 m	kg											*2 860	*2 860	4.7
Arm :	3.0m	6.0 m	kg							*2 800	*2 800			*2 780	2750	6.2
Shoe :	700mm	4.5 m	kg							*2 810	*2 810			*2 630	2220	7.0
CWT :	2 450kg	3.0 m	kg			*4 600	*4 600	*3 580	*3 580	*3 200	2790			*2 640	1980	7.5
		1.5 m	kg			*7 660	7360	*4 770	4050	*3 750	2680	2930	1930	*2 780	1900	7.6
		0 m	kg			*6 630	*6 630	*5 710	3850	3980	2590			2960	1940	7.4
		-1.5 m	kg	*4 370	*4 370	*9 250	6900	6030	3770	3930	2540			3270	2130	6.9
		-3.0 m	kg	*7 910	*7 910	*8 930	6970	*5 870	3790					4070	2640	5.9
		-4.5 m	kg			*6 780	*6 780									4.2
Boom :	4.6m 2-piece	7.5 m	kg			*5 890	*5 890							*5 170	*5 170	3.3
Arm :	2.1m	6.0 m	kg			*5 090	*5 090	*4 760	4530					*3 900	3570	5.2
Shoe :	700mm	4.5 m	kg			*5 740	*5 740	*5 020	4450	4280	2840			*3 560	2710	6.2
CWT :	2 450kg	3.0 m	kg					*5 860	4240	4210	2790			*3 510	2360	6.7
		1.5 m	kg					6340	4020	4120	2700			3430	2260	6.8
		0 m	kg					6190	3890	4050	2630			3560	2330	6.6
		-1.5 m	kg			*9 070	7060	6160	3860					4080	2660	6.0
Boom :	4.6m 2-piece	7.5 m	kg			*4 960	*4 960							*3 950	*3 950	4.1
Arm :	2.5m	6.0 m	kg			*4 290	*4 290	*4 310	*43 10					*3 160	3110	5.7
Shoe :	700mm	4.5 m	kg			*4 220	*4 220	*4 640	4500	*4 240	2880			*2 910	2450	6.6
CWT :	5 000kg	3.0 m	kg					*5 520	4280	4230	2800			*2 880	2170	7.1
		1.5 m	kg					6370	4040	4120	2700			*2 990	2070	7.2
		0 m	kg			*5 730	*5 730	6180	3880	4030	2620			3250	2130	7.0
		-1.5 m	kg			*9 640	6990	6120	3820	4010	2590			3660	2380	6.4
		-3.0 m	kg													5.5
Boom :	4.6m 2-piece	7.5 m	kg					*3 860	*3 860					*3 120	*3 120	4.9
Arm :	3.0m	6.0 m	kg					*3 750	*3 750	*3 380	2910			*2 620	*2 620	6.3
Shoe :	700mm	4.5 m	kg			*3 010	*3 010	*3 820	*3 820	*3 870	2900			*2 430	2160	7.1
CWT :	2 450kg	3.0 m	kg					*5 050	4330	*4 230	2800	*2 730	1970	*2 400	1940	7.6
		1.5 m	kg					*6 100	4050	4110	2680	2940	1930	*2 480	1860	7.7
		0 m	kg			*6 050	*6 050	6160	3850	4000	2580			*2 700	1900	7.5
		-1.5 m	kg	*4 020	*4 020	*8 770	6880	6060	3760	3950	2540			*3 140	2090	7.0
		-3.0 m	kg			*8 350	6960	*5 710	3780							6.0

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.

Equipment

STANDARD EQUIPMENT

Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f EU (Stage IV) requirements
Air filter with indicator
Air intake heater
Cyclone pre-cleaner
Electric engine shut-off
Fuel filter and water separator
Fuel filler pump: 30 l/min
Alternator, 80 A
Standard cooling system by fan clutch(40 deg. C)

Electric / Electronic control system

Contronics

Advanced mode control system
Self-diagnostic system
Machine status indication
GSM/GPS Caretrack and 3yr-Caretrack subscription
Engine speed sensing power control
Automatic idling system
One-touch power boost
Safety stop/start function
Adjustable LCD color monitor
Master electrical disconnect switch
Engine restart prevention circuit
High-capacity halogen or LED lights:
Halogen
Frame-mounted: 2, Boom-mounted: 1
LED
Frame-mounted: 2, Boom-mounted: 1
Batteries, 2 x 12 V / 100 Ah
Start motor, 24 V / 5.5 kW

Frame

Access way with handrail
Tool storage area
Punched metal anti-slip plates
Under cover (heavy duty)
2 450kg counterweight for Long Crawler (L), Long Crawler Marsh (LM)

Undercarriage

Under cover (heavy duty)
Hydraulic track adjusters
Greased and sealed track link
Track Guard

Hydraulic system

Boom hose rupture valve with overload warning device
Arm hose rupture valve
Automatic sensing hydraulic system
Summation system
Boom priority
Arm priority
Swing priority
ECO mode fuel saving technology
Boom, arm and bucket regeneration valves
Swing anti-rebound valves
Boom and arm holding valves
Multi-stage filtering system
Boom cylinders (x2)
Cylinder cushioning
Cylinder contamination seals
Auxiliary hydraulic valve
Automatic two-speed travel motors
Hydraulic oil, longlife oil 46

STANDARD EQUIPMENT

Cab and interior

ROPS (ISO12117-2) certified cab with opening top hatch
Silicon oil and rubber mounts with spring
Control lock out lever
Travel pedals and hand levers
Adjustable operator seat with heater and joystick control console
Control joysticks with 4 switches each
Heater & air-conditioner, automatic
Flexible antenna
Radio with MP3 and USB Jack with bluetooth
Cab, all-weather sound suppressed, includes:
Cup holders
Door locks
Tinted glass
Floor mat
Horn
Large storage area
Pull-up type front window
Removable lower windshield
Seat belt
Safety glass
Sun screens, front, roof, rear
Rain shield
Windshield wiper with intermittent feature
Rear view camera
Master key

Digging Equipment

4.6 m mono boom
2.5 m arm
Linkage
Manual centralized lubrication

OPTIONAL EQUIPMENT

Engine

Block heater: 120 V, 240 V
Air cleaner only
Diesel coolant heater, 5 kW
Water separator with heater
Auto engine shutdown
Tropical cooling system (50 deg. C)

Electric

Extra work lights (Halogen or LED):
Cab-mounted 3
Counterweight-mounted 1
Travel alarm
Anti-theft system
Rotating warning beacon

Undercarriage

Dozer blade
Full track guard
EC140EL: 500/600/600 HD/700/750 mm shoe with triple grousers and 500 mm with rubber grousers
EC140ELM: 600/700/800/900 mm shoe with triple grousers

OPTIONAL EQUIPMENT

Hydraulic system

Boom float function with HRV

Boom float function without HRV

Hydraulic piping:

Work tool management system (up to 20 programmable memories)

Breaker & shear, 1 and 2 pump flow

Slope & rotator (40lpm or 60lpm)

Extra for slope & rotator

Grapple

Oil leak (drain) line

Quick coupler

Breaker & shear pressure pre-setting

Volvo hydraulic quick coupler S6, S6 without hook

Volvo hydraulic quick coupler VQC-HU,DR14 / RQC-HD, Steelwrist S60

Hydraulic oil, biodegradable 46

Hydraulic oil, ISO VG 32,42, 68

Hydraulic oil, longlife oil 32, 68

OPTIONAL EQUIPMENT

Cab and interior

Fabric seat without heater

Fabric seat with heater and air suspension

Control joysticks with semi-long

Control joysticks with 3 switch & 1 propotional

Cab-mounted falling object guard (FOG)

Cab-mounted falling object protective structure (FOPS)

Pilot control pattern change

Side view camera

Smoker kit (ashtray and lighter)

Safety net for front window

Sunlight protection, roof (steel)

Lower wiper with intermittent control

Anti-vandalism kit

Specific key

Digging Equipment

4.6 m 2-piece boom

2.1 m, 3.0 m arm

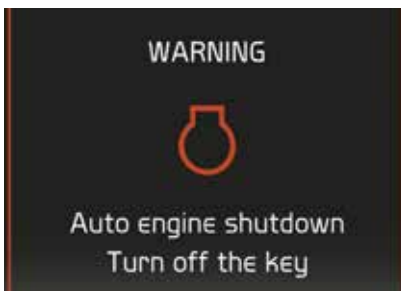
Linkage with lifting eye

Service

Tool kit, daily maintenance

Tool kit, full scale

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Auto engine shutdown**Two-piece boom****Diesel coolant heater****LED lights****Fuel fill pump****Dozer blade**

Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.