

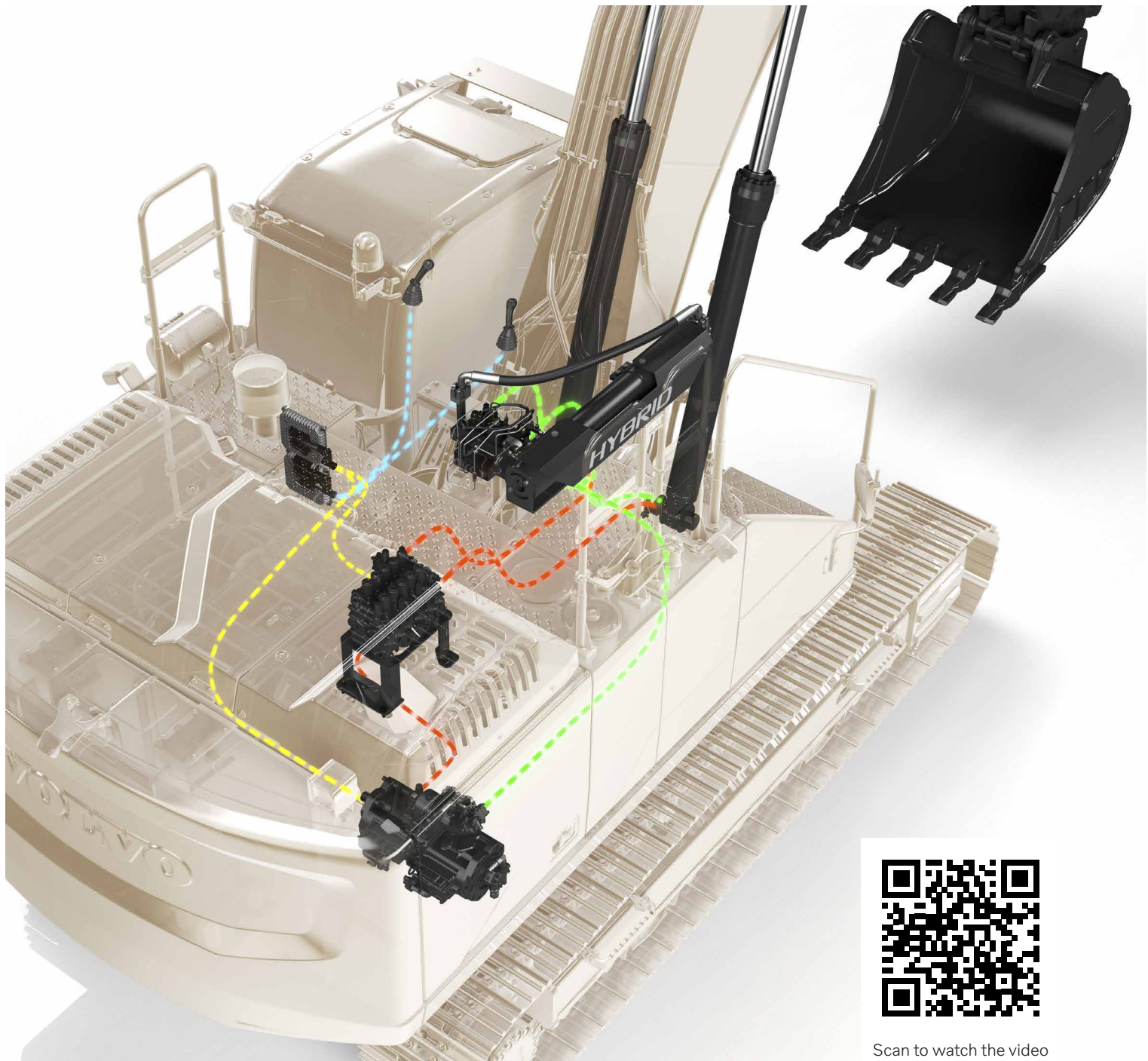
Volvo Construction Equipment
Building Tomorrow



EC300E HYBRID

Volvo Excavators





Simple solution, big savings

Introducing the upgraded EC300E Hybrid. Featuring unique hydraulic hybrid Volvo technology, the excavator utilizes the boom down motion to charge the accumulator, with the stored energy used to drive the assist motor, which lowers the torque requirement on the engine.

This results in up to 15% lower fuel consumption while delivering all the power and performance you would expect from a conventional EC300E.

*Efficiency and savings may vary based on operator, application and conditions.



UP TO*:

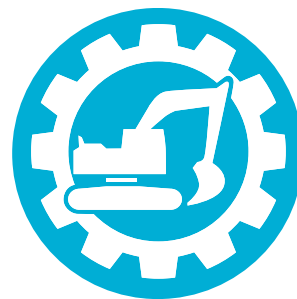
17%

greater fuel
efficiency*



15%

lower fuel
consumption* †

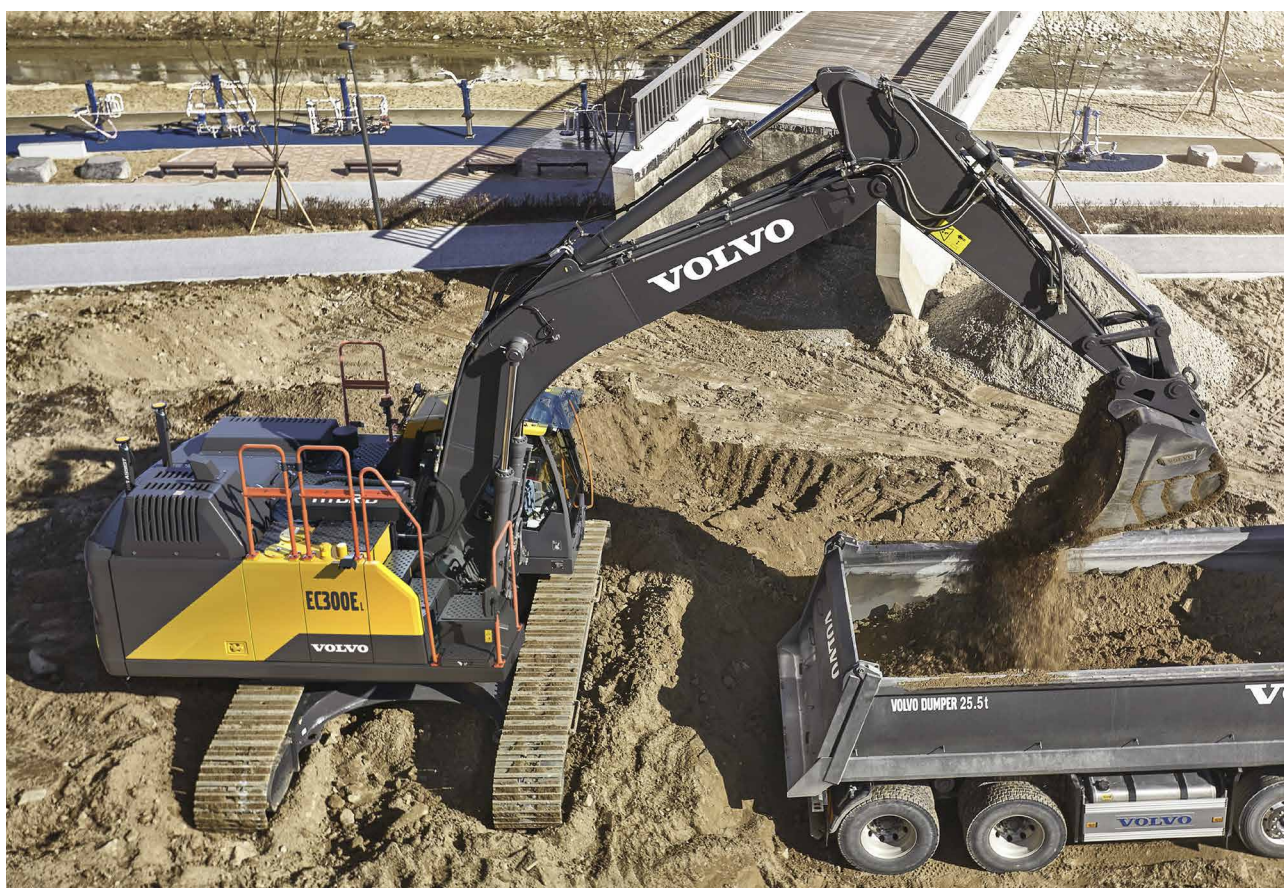


100%

Volvo engineered
hydraulic hybrid

Simply reliable

The uncomplicated and reliable hybrid solution is easy to maintain and consists of just a handful of add-on components, meaning no disruption or complication to how the high performing EC300E is engineered.



Cleaner and greener

The EC300E Hybrid reduces CO₂ emissions by up to 15%* making it a more environmentally respectful choice, especially when working in built-up areas.

Rapid payback

When working in dig and dump applications, the EC300E Hybrid is a straightforward solution with fast payback. Save fuel, lower emissions and boost the profitability of your operation.

EC300E Hybrid in detail

Engine

The next-generation Volvo diesel engine uses Volvo Advanced Combustion Technology (V-ACT) to deliver lower emissions, superior performance and fuel efficiency. The engine uses precise, highpressure fuel injectors, turbo charger and intercooler, and electronic engine controls to optimize machine performance.

Engine	Volvo	D8M
Max power at	r/min (r/s)	1,600 (26.7)
Net, ISO 9249/SAE J1349	kW (hp)	188 (252)
Gross, ISO 14396/SAE J1995	kW (hp)	189 (253)
Max torque	Nm (ft lbf)	1,290 (951.5)
at engine speed	r/min (r/s)	1,400 (23.3)
No. of cylinders		6
Displacement	l (in ³)	7.7 (469.9)
Bore	mm (in)	110 (4.3)
Stroke	mm (in)	135 (5.3)

Hybrid

The uncomplicated and reliable hybrid solution, Volvo's novel hydraulic hybrid harvests 'free' energy generated by the down motion of the excavator's boom and uses it to supercharge the engine system. The powerful and regular boom-down motions charge the 20 litre hydraulic accumulator (5.3 gallon), which then delivers energy to drive the hydraulic assist motor that helps to power the engine system. There are the same levels of controllability and performance as the standard EC300E, including the ability to work in ECO mode and Hybrid mode simultaneously.

Accumulator

No. of accumulator		1
Displacement	l (gal)	20 (5.3)

Electrical System

High-capacity electrical system that is well protected. 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.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	170
Alternator	V/A	28 / 80
Start motor	V - kW	24 - 5.5

Undercarriage

The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.

Track shoes		2 x 50
Link pitch	mm (in)	203.2 (7.9)
Shoe width	mm (in)	600 / 700 / 800 / 900 (23.6 / 27.6 / 31.5 / 35.4)
Shoe width, triple grouser	mm (in)	600 / 700 / 800 / 900 (23.6 / 27.6 / 31.5 / 35.4)
Shoe width, triple grouser (HD)	mm (in)	600 (23.6)
Shoe width, double grouser	mm (in)	700 (27.6)
Bottom rollers		2 x 9
Top rollers		2 x 2

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.

Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO₂-eq.

Swing system

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

Max. slew speed	r/min	11
Max. slew torque	kNm (ft lbf)	114.8 (84,672)

Travel System

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)	248 (55,752.6)
Max. travel speed (low)	km/h (mi/h)	3.6 (2.2)
Max. travel speed (high)	km/h (mi/h)	5.4 (3.4)
Gradeability	°	35

Sound Level

Sound pressure level in cab according to ISO 6396		
L _{pA}	dB	70
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L _{WA}	dB	104

Hydraulic system

The hydraulic system, also known as the "Automatic Sensing Work Mode," is designed for high-productivity, high-digging capacity, high-maneuvering precision and excellent fuel economy. The summation system, boom, arm and swing priority along with boom, arm and bucket regeneration provides optimum performance.

Main pump, Type 2 x Variable displacement axial piston pumps

Maximum flow	l/min (gal/min)	2 x 276 (2 x 72.9)
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Pilot pump, Type Gear Pump

Maximum flow	l/min (gal/min)	20.3 (5.4)
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Relief value setting pressure

Implement	MPa (psi)	33.3 / 36.3 (4,830 / 5,265)
Travel circuit	MPa (psi)	36.3 (5,264.9)
Slew circuit	MPa (psi)	28.9 (4,191.6)
Pilot circuit	MPa (psi)	3.9 (565.6)

Hydraulic Motors

Travel: Variable displacement axial piston motor with mechanical brake
Swing: Fixed displacement piston motor with mechanical brake

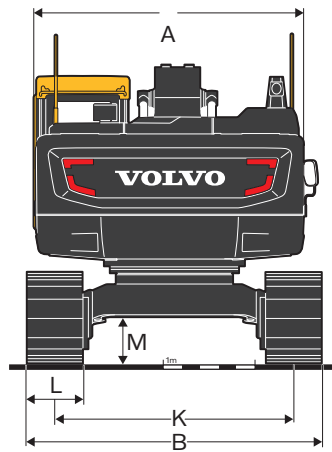
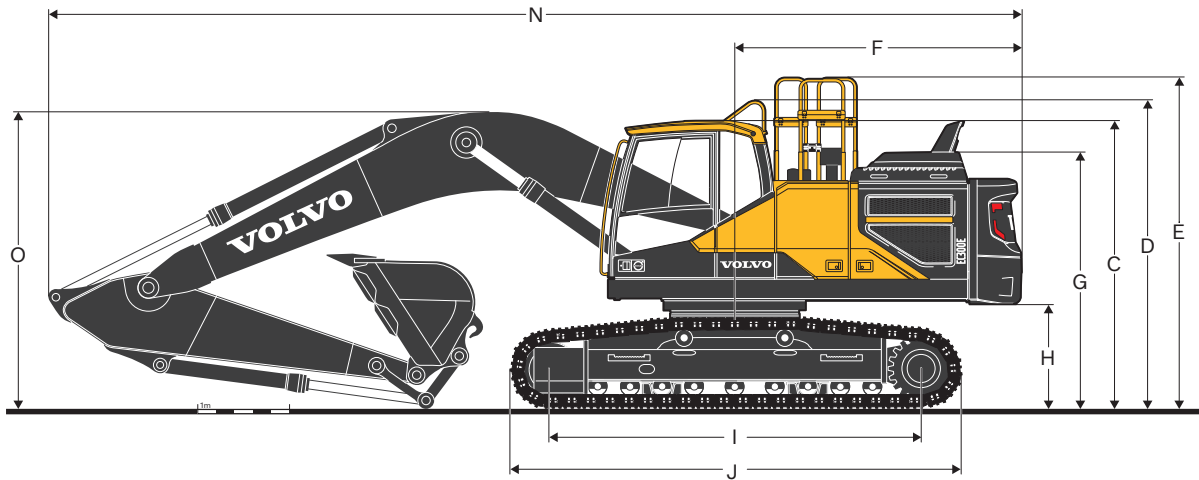
Hydraulic Cylinders

Mono boom		2
Bore x Stroke	ø x mm (ø x in)	140 x 1 480 (5.5 x 58.3)
Arm		1
Bore x Stroke	ø x mm (ø x in)	150 x 1 745 (5.9 x 68.7)
Bucket		1
Bore x Stroke	ø x mm (ø x in)	140 x 1 140 (5.5 x 44.9)

Service Refill

Fuel tank	l (gal)	472 (124.7)
DEF/AdBlue® tank	l (gal)	50 (13.2)
Hydraulic system, total	l (gal)	385 (101.7)
Hydraulic tank	l (gal)	215 (56.8)
Engine oil	l (gal)	30 (7.9)
Engine coolant	l (gal)	44 (11.6)
Slew reduction unit	l (gal)	6.1 (1.6)
Travel reduction unit	l (gal)	2 x 6 (2 x 1.6)

Specifications

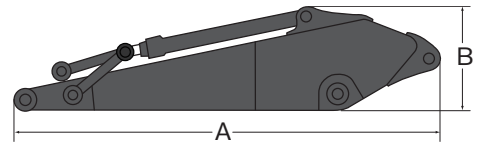
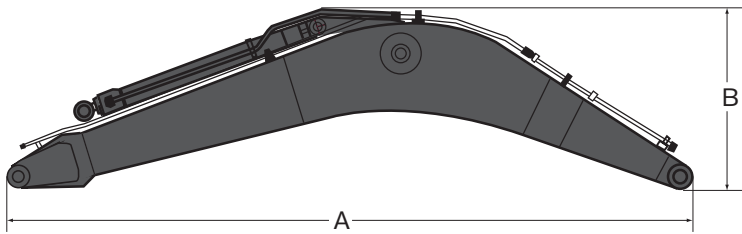


DIMENSIONS

Description	Unit		EC300EL Hybrid					
Boom	m, ft in		6.2, 20'4"					
Arm	m	ft in	2.55	8'4"	3.05	10'0"	3.7	12'2"
A. Overall width of upper structure	mm	ft in	2,890	9'6"	2,890	9'6"	2,890	9'6"
B. Overall width	mm	ft in	3,190	10'6"	3,190	10'6"	3,190	10'6"
C. Overall height of cab	mm	ft in	3,110	10'2"	3,110	10'2"	3,110	10'2"
D. Overall height of handrail	mm	ft in	3,360	11'0"	3,360	11'0"	3,360	11'0"
E. Overall height of guardrail (Unfolded)	mm	ft in	3,570	11'9"	3,570	11'9"	3,570	11'9"
E'. Overall height of handrail/guardrail (Folded)	mm	ft in	3,090	10'2"	3,090	10'2"	3,090	10'2"
F. Tail swing radius	mm	ft in	3,120	10'3"	3,120	10'3"	3,120	10'3"
G. Overall height of diffuser	mm	ft in	3,200	10'6"	3,200	10'6"	3,200	10'6"
H. Counterweight clearance *	mm	ft in	1,105	3'8"	1,105	3'8"	1,105	3'8"
I. Tumbler length	mm	ft in	4,015	13'2"	4,015	13'2"	4,015	13'2"
J. Track length	mm	ft in	4,865	16'0"	4,865	16'0"	4,865	16'0"
K. Track gauge	mm	ft in	2,590	8'6"	2,590	8'6"	2,590	8'6"
L. Shoe width	mm	ft in	600	24"	600	24"	600	24"
M. Min. ground clearance *	mm	ft in	475	1'7"	475	1'7"	475	1'7"
N. Overall length	mm	ft in	10,605	34'10"	10,500	34'5"	10,540	34'7"
O. Overall height of boom	mm	ft in	3,470	11'5"	3,345	11'0"	3,580	11'9"

* Without shoe grouser

' 2-piece boom



DIMENSIONS

Description	Unit		mono			
Boom	m, ft in		6.2, 20'4" GP		6.2, 20'4" HD	
Length	mm	ft in	6,425	21'1"	6,425	21'1"
Height - Hose	mm	ft in	1,780	5'10"	1,780	5'10"
Height - Pipe	mm	ft in	1,665	5'6"	1,665	5'6"
Width	mm	ft in	765	2'6"	765	2'6"
Weight	kg	lb	2,505	5,520	2,735	6,030

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

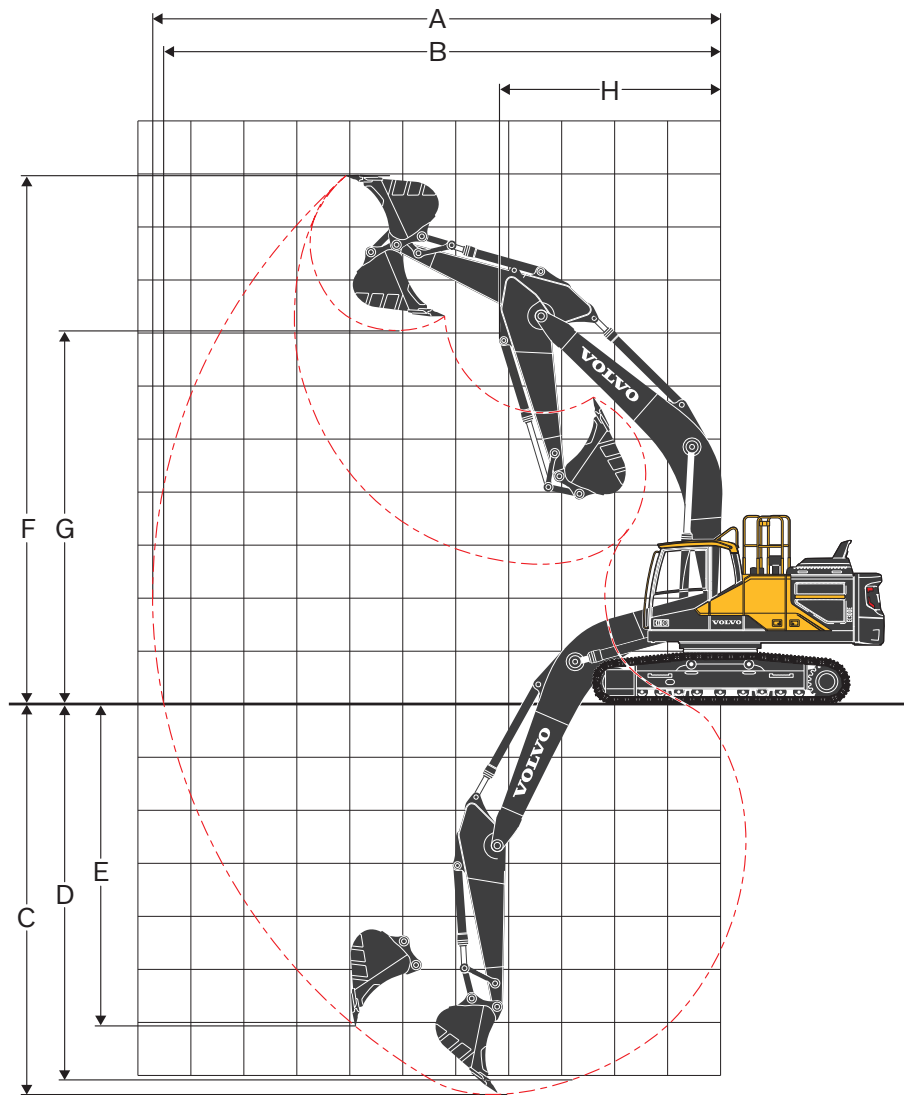
Description	Unit									
Arm	m, ft in		2.55, 8'4" HD		3.05, 10'0" GP		3.05, 10'0" HD		3.7, 12'2" GP	
Length	mm	ft in	3,720	12'2"	4,145	13'7"	4,145	13'7"	4,800	15'9"
Height	mm	ft in	1,005	3'4"	1,010	3'4"	1,010	3'4"	1,005	3'4"
Width	mm	ft in	560	1'10"	560	1'10"	560	1'10"	560	1'10"
Weight	kg	lb	1,450	3,200	1,510	3,330	1,570	3,460	1,630	3,590

* Includes cylinder, linkage and pin

Specifications

WORKING RANGES											
Description				Unit		EC300EL Hybrid					
Boom				m, ft in		6.2, 20'4" mono					
Arm				m	ft in	2.55	8'4"	3.05	10'0"	3.7	12'2"
A. Max. digging reach				mm	ft in	10,180	33'5"	10,710	35'2"	11,310	37'1"
B. Max. digging reach on ground				mm	ft in	9,970	32'9"	10,520	34'6"	11,130	36'6"
C. Max. digging depth				mm	ft in	6,840	22'5"	7,340	24'1"	7,990	26'3"
D. Max.digging depth (l = 2.44 m / 8'0" level)				mm	ft in	6,600	21'8"	7,150	23'5"	7,830	25'8"
E. Max. vertical wall digging depth				mm	ft in	5,320	17'5"	6,080	19'11"	6,680	21'11"
F. Max. cutting height				mm	ft in	9,560	31'4"	9,980	32'9"	10,260	33'8"
G. Max. dumping height				mm	ft in	6,680	21'11"	7,040	23'1"	7,330	24'1"
H. Min. front swing radius				mm	ft in	4,220	13'10"	4,180	13'9"	4,240	13'11"
DIGGING FORCES WITH DIRECT FIT BUCKET											
Bucket radius				mm	in	1,624	64"	1,624	64"	1,624	64"
Breakout force	Normal	SAE J1179	kN	lb	165	37,050	165	37,050	165	37,040	
			Power boost	kN	lb	179	40,320	179	40,320	179	40,310
	Normal	ISO 6015	kN	lb	190	42,680	190	42,680	190	42,670	
			Power boost	kN	lb	207	46,450	207	46,450	207	46,440
Tearout force	Normal	SAE J1179	kN	lb	158	35,500	133	29,790	116	26,090	
			Power boost	kN	lb	172	38,630	144	32,420	126	28,400
	Normal	ISO 6015	kN	lb	163	36,580	136	30,550	118	26,630	
			Power boost	kN	lb	177	39,810	148	33,250	129	28,980
Rotation angle, bucket				°		179		179		179	

MACHINE WITH MONO BOOM



Specifications

MACHINE WEIGHTS AND GROUND PRESSURE								
Description	Shoe width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	in
EC300EL Hybrid								
			6.2 m (20'4") boom (GP), 3.05 m (10'0") arm (GP), 1,209 kg (2,670 lb) / 1.32 m³ (349 gal) bucket, 6,200 kg (13,670 lb) counterweight					
Triple grouser	600	24	31,120	68,620	60.0	8.7	3,190	10'6"
	600 (HD)	24	31,340	69,100	60.5	8.8	3,190	10'6"
	700	28	31,710	69,920	52.4	7.6	3,290	10'10"
	800	31	32,070	70,710	46.4	6.7	3,390	11'1"
	900	35	32,430	71,510	41.7	6.0	3,490	11'5"
Double grouser	700	28	31,900	70,340	52.8	7.6	3,290	10'10"
			6.2 m (20'4") boom (HD), 3.05 m (10'0") arm (HD), 1,209 kg (2,670 lb) / 1.32 m³ (349 gal) bucket, 6,200 kg (13,670 lb) counterweight					
Triple grouser	600	24	31,420	69,280	60.6	8.8	3,190	10'6"
	600 (HD)	24	31,630	69,740	61.0	8.8	3,190	10'6"
	700	28	32,000	70,560	52.9	7.7	3,290	10'10"
	800	31	32,360	71,350	46.8	6.8	3,390	11'1"
	900	35	32,720	72,150	42.1	6.1	3,490	11'5"
Double grouser	700	28	32,190	70,980	53.2	7.7	3,290	10'10"

BUCKET SELECTION GUIDE

Bucket type		Capacity		Cutting width		Weight		Teeth	EC300EL Hybrid		
									600 mm (24") shoe, 6,200 kg (13,670 lb) counterweight		
									6.2 m (20'4") GP Boom		
									2.55 m (8'4")	3.05 m (10'0")	3.7 m (12'2")
Direct fit bucket	General purpose	550	0.72	600	23.6	883	1,946	3	C	C	C
		660	0.86	750	29.5	867	1,912	3	C	C	C
		770	1.01	900	35.4	996	2,197	4	C	C	C
		950	1.24	1,090	42.9	1,025	2,260	4	C	C	C
		1,140	1.49	1,240	48.8	1,192	2,629	5	C	C	C
		1,320	1.73	1,390	54.7	1,209	2,666	5	C	C	C
		1,450	1.90	1,490	58.7	1,270	2,799	5	C	C	C
		1,510	1.98	1,540	60.6	1,314	2,897	5	C	C	C
		1,760	2.30	1,740	68.5	1,448	3,193	6	C	C	B
	Heavy duty	1,930	2.52	1,840	72.4	1,529	3,370	6	C	C	B
		2,060	2.69	1,950	76.8	1,590	3,506	6	C	B	A
		550	0.72	600	23.6	881	1,942	3	D	D	D
		660	0.86	750	29.5	920	2,029	3	D	D	D
		1,140	1.49	1,240	48.8	1,214	2,677	5	D	D	D
		1,270	1.66	1,405	55.3	1,336	2,945	5	D	D	D
		1,320	1.73	1,390	54.7	1,301	2,868	5	D	D	D
		1,510	1.98	1,540	60.6	1,387	3,058	5	D	D	D
		1,690	2.21	1,690	66.5	1,485	3,274	5	D	D	B
		1,930	2.52	1,840	72.4	1,623	3,578	6	C	B	A
Direct fit bucket (UQC interface)	General purpose	550	0.72	600	23.6	883	1,946	3	C	C	C
		660	0.86	750	29.5	867	1,912	3	C	C	C
		770	1.01	900	35.4	996	2,197	4	C	C	C
		950	1.24	1,090	42.9	1,025	2,260	4	C	C	C
		1,140	1.49	1,240	48.8	1,192	2,629	5	C	C	C
		1,320	1.73	1,390	54.7	1,209	2,666	5	C	C	C
		1,450	1.90	1,490	58.7	1,270	2,799	5	C	C	C
		1,510	1.98	1,540	60.6	1,314	2,897	5	C	C	B
		1,760	2.30	1,740	68.5	1,448	3,193	6	C	B	A
	Heavy duty	1,930	2.52	1,840	72.4	1,529	3,370	6	B	B	A
		2,060	2.69	1,950	76.8	1,590	3,506	6	B	A	X
		550	0.72	600	23.6	881	1,942	3	D	D	D
		660	0.86	750	29.5	920	2,029	3	D	D	D
		1,140	1.49	1,240	48.8	1,214	2,677	5	D	D	D
		1,320	1.73	1,390	54.7	1,301	2,868	5	D	D	C
		1,510	1.98	1,540	60.6	1,387	3,058	5	D	D	B
		1,690	2.21	1,690	66.5	1,485	3,274	5	D	B	A
		1,930	2.52	1,840	72.4	1,623	3,578	6	B	A	X

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			
	kg/m ³	lb/yd ³	
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
X	Not recommended		

Specifications

LIFTING CAPACITY EC300EL Hybrid

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 Point	1.5 m, 5 ft		3.0 m, 10 ft		4.5 m, 15 ft		6.0 m, 20 ft		7.5 m, 25 ft		9.0 m, 30 ft		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	Along UC	Across UC	Max.
Boom : 6.2 m, 20'34" Arm : 2.55 m, 8'4" Shoe : 600 mm, 24" CWT : 6,200 kg, 13,670 lb	7.5 m kg							*7,740	*7,740					*7,900	7,640	6.52 m
	25 ft lb							*17,180	*17,180					*17,450	17,300	21.04 ft
	6.0 m kg							*8,080	*8,080	*7,890	6,040			*7,900	5,970	7.55 m
	20 ft lb							*17,660	*17,660					*17,420	13,320	24.60 ft
	4.5 m kg					*11,410	*11,410	*9,190	8,330	*8,220	5,930			7,940	5,160	8.18 m
	15 ft lb					*24,500	*24,500	*19,940	17,970	*17,970	12,770			17,600	11,440	26.76 ft
	3.0 m kg					*14,580	11,950	*10,630	7,930	*8,890	5,740			7,370	4,760	8.50 m
	10 ft lb					*31,310	25,820	*23,000	17,120	19,250	12,390			16,280	10,520	27.86 ft
	1.5 m kg					*16,750	11,340	*11,900	7,590	8,740	5,570			7,220	4,630	8.54 m
	5 ft lb					*36,130	24,460	*25,760	16,380	18,830	12,020			15,910	10,220	28.01 ft
	0 m kg					*17,340	11,140	12,030	7,390	8,610	5,450			7,440	4,750	8.31 m
	0 ft lb					*37,580	23,990	25,890	15,940	18,560	11,770			16,410	10,480	27.25 ft
	-1.5 m kg			*12,880	*12,880	*16,910	11,150	11,970	7,340	8,590	5,430			8,170	5,190	7.78 m
	-5 ft lb			*29,370	*29,370	*36,700	24,000	25,760	15,830	18,530	11,740			18,050	11,470	25.48 ft
	-3.0 m kg			*21,080	*21,080	*15,540	11,310	*11,740	7,430					9,850	6,200	6.88 m
	-10 ft lb			*45,790	*45,790	*33,640	24,350	*25,310	16,040					*21,770	13,770	22.46 ft
	-4.5 m kg			*16,820	*16,820	*12,520	11,670							*10,110	8,870	5.44 m
	-15 ft lb			*36,120	*36,120	*26,730	25,170							*22,290	20,070	17.54 ft
Boom : 6.2 m, 20'34" Arm : 3.05 m, 10'0" Shoe : 600 mm, 24" CWT : 6,200 kg, 13,670 lb	7.5 m kg													*6,380	*6,380	7.20 m
	25 ft lb													*14,340	*14,340	23.32 ft
	6.0 m kg									*7,240	6,130			*6,120	5,320	8.15 m
	20 ft lb									*15,950	13,210			*13,690	11,880	26.57 ft
	4.5 m kg					*10,280	*10,280	*8,540	8,440	*7,710	5,990			*6,120	4,680	8.73 m
	15 ft lb							*18,510	18,210	*16,850	12,910			*13,640	10,370	28.58 ft
	3.0 m kg					*13,480	12,210	*10,050	8,020	*8,470	5,780	*6,600	4,370	*6,330	4,350	9.03 m
	10 ft lb					*28,820	26,210	*21,680	17,250	*18,410	12,450			*14,080	9,600	29.61 ft
	1.5 m kg					*16,040	11,470	*11,460	7,640	8,760	5,580	*6,670	4,290	6,600	4,240	9.07 m
	5 ft lb					*34,380	24,510	*24,710	16,380	18,840	12,000			14,540	9,340	29.76 ft
	0 m kg					*17,170	11,140	12,040	7,390	8,600	5,430			6,770	4,330	8.85 m
	0 ft lb					*36,920	23,730	25,780	15,820	18,470	11,670			14,920	9,530	29.04 ft
	-1.5 m kg	*7,610	*7,610	*11,750	*11,750	*17,140	11,070	11,920	7,290	8,530	5,370			7,330	4,660	8.36 m
	-5 ft lb	*17,240	*17,240	*26,870	*26,870	*36,930	23,580	25,520	15,600	18,340	11,550			16,170	10,280	27.38 ft
	-3.0 m kg	*13,880	*13,880	*19,440	*19,440	*16,140	11,170	11,970	7,330	8,610	5,440			8,560	5,420	7.53 m
	-10 ft lb	*31,360	*31,360	*44,400	*44,400	*34,750	23,830	25,650	15,710					18,970	11,990	24.61 ft
	-4.5 m kg			*18,990	*18,990	*13,800	11,450	*10,080	7,560					*9,460	7,180	6.24 m
	-15 ft lb			*40,570	*40,570	*29,460	24,520	*21,200	16,310					*20,800	16,080	20.23 ft
Boom : 6.2 m, 20'34" Arm : 3.7 m, 12'2" Shoe : 600 mm, 24" CWT : 6,200 kg, 13,670 lb	7.5 m kg									*6,290	6,220			*4,930	*4,930	7.96 m
	25 ft lb									*12,940	*12,940			*10,930	*10,930	25.82 ft
	6.0 m kg									*6,390	6,170			*4,750	4,660	8.82 m
	20 ft lb									*14,060	13,270			*10,490	10,370	28.78 ft
	4.5 m kg							*7,580	*7,580	*6,980	6,010	*6,390	4,450	*4,750	4,150	9.36 m
	15 ft lb							*16,450	*16,450	*15,260	12,940	*12,690	9,550	*10,460	9,190	30.64 ft
	3.0 m kg					*11,960	*11,960	*9,180	8,110	*7,840	5,790	6,740	4,350	*4,900	3,880	9.64 m
	10 ft lb					*25,720	*25,720	*19,870	17,490	*17,060	12,470	14,510	9,350	*10,780	8,560	31.60 ft
	1.5 m kg					*14,940	11,680	*10,770	7,690	*8,730	5,560	6,620	4,230	*5,200	3,780	9.67 m
	5 ft lb					*32,220	25,180	*23,320	16,580	18,840	11,990	14,250	9,110	*11,460	8,340	31.74 ft
	0 m kg			*6,730	*6,730	*16,680	11,190	*11,960	7,380	8,550	5,380	6,520	4,140	*5,730	3,840	9.47 m
	0 ft lb			*15,390	*15,390	*36,090	24,100	*25,910	15,920	18,410	11,600	14,040	8,920	*12,630	8,480	31.07 ft
	-1.5 m kg	*6,940	*6,940	*10,930	*10,930	*17,190	11,010	11,870	7,220	8,440	5,280	6,480	4,100	6,470	4,100	9.01 m
	-5 ft lb	*15,520	*15,520	*24,780	*24,780	*37,250	23,700	25,510	15,570	18,170	11,390			14,290	9,050	29.53 ft
	-3.0 m kg	*11,570	*11,570	*16,550	*16,550	*16,670	11,030	11,840	7,200	8,440	5,280			7,370	4,650	8.25 m
	-10 ft lb	*25,970	*25,970	*37,550	*37,550	*36,120	23,750	25,460	15,530	18,190	11,400			16,340	10,320	26.98 ft
	-4.5 m kg	*17,310	*17,310	*21,340	*21,340	*15,000	11,220	*11,150	7,330					*8,820	5,830	7.10 m
	-15 ft lb	*39,050	*39,050	*46,020	*46,020	*32,320	24,180	*23,900	15,820					*19,480	13,060	23.07 ft
	-6.0 m kg			*15,770	*15,770	*11,150	11,150							*9,030	*9,030	5.29 m
	-20 ft lb			*33,270	*33,270	*23,290	*23,290							*19,890	*19,890	16.85 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 EC300EL Hybrid

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 Point	1.5 m, 5 ft		3.0 m, 10 ft		4.5 m, 15 ft		6.0 m, 20 ft		7.5 m, 25 ft		9.0 m, 30 ft		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	Along UC	Across UC	Max.
Boom : 6.2 m, 20'34" Arm : 2.55 m, 8'4" Shoe : 800 mm, 32" CWT : 6,200kg, 13,670 lb	7.5 m kg							*7,700	*7,700					*7,860	*7,860	6.52 m
	25 ft lb							*17,100	*17,100					*17,360	*17,360	21.04 ft
	6.0 m kg							*8,040	*8,040	*7,840	6,240			*7,850	6,170	7.55 m
	20 ft lb							*17,570	*17,570					*17,300	13,780	24.60 ft
	4.5 m kg					*11,350	*11,350	*9,140	8,620	*8,160	6,130			*7,990	5,340	8.18 m
	15 ft lb					*24,370	*24,370	*19,820	18,590	*17,850	13,210			*17,610	11,830	26.76 ft
	3.0 m kg					*14,480	12,350	*10,560	8,190	*8,820	5,940			*7,660	4,920	8.50 m
	10 ft lb					*31,090	26,680	*22,840	17,690	*19,200	12,810			16,910	10,870	27.86 ft
	1.5 m kg					*16,620	11,700	*11,810	7,840	9,080	5,750			7,490	4,790	8.54 m
	5 ft lb					*35,850	25,240	*25,560	16,920	19,560	12,420			16,530	10,560	28.01 ft
	0 m kg					*17,200	11,490	12,490	7,630	8,940	5,630			7,730	4,910	8.31 m
	0 ft lb					*37,270	24,740	26,870	16,460	19,270	12,150			17,040	10,830	27.25 ft
	-1.5 m kg			*12,880	*12,880	*16,770	11,490	12,420	7,570	8,920	5,610			8,480	5,360	7.78 m
	-5 ft lb			*29,370	*29,370	*36,390	24,740	26,720	16,330	19,230	12,120			18,740	11,840	25.48 ft
Boom : 6.2 m, 20'34" Arm : 3.05 m, 10'0" Shoe : 800 mm, 32" CWT : 6,200 kg, 13,670 lb	-3.0 m kg			*20,880	*20,880	*15,400	11,660	*11,630	7,660					*9,770	6,400	6.88 m
	-10 ft lb			*45,350	*45,350	*33,340	25,100	*25,080	16,550					*21,570	14,210	22.46 ft
	-4.5 m kg			*16,640	*16,640	*12,400	12,030							*10,010	9,150	5.44 m
	-15 ft lb			*35,730	*35,730	*26,450	25,950							*22,050	20,710	17.54 ft
	7.5 m kg													*6,470	*6,470	7.20 m
	25 ft lb													*14,340	*14,340	23.32 ft
	6.0 m kg									*7,190	6,360			*6,200	5,510	8.15 m
	20 ft lb									*15,850	13,670			*13,690	12,290	26.57 ft
	4.5 m kg					*10,200	*10,200	*8,480	*8,480	*7,660	6,200			*6,200	4,840	8.73 m
	15 ft lb							*18,400	*18,400	*16,730	13,360			*13,640	10,730	28.58 ft
	3.0 m kg					*13,320	12,550	*9,950	8,270	*8,390	5,970	*6,680	4,520	*6,400	4,500	9.03 m
	10 ft lb					*28,630	27,100	*21,540	17,850	*18,270	12,880			*14,080	9,930	29.61 ft
	1.5 m kg					*15,820	11,730	*11,320	7,840	9,080	5,750	6,930	4,420	*6,830	4,380	9.07 m
	5 ft lb					*34,120	25,310	*24,520	16,940	19,570	12,400			*15,030	9,650	29.76 ft
Boom : 6.2 m, 20'34" Arm : 3.7 m, 12'2" Shoe : 800 mm, 32" CWT : 6,200 kg, 13,670 lb	0 m kg					*16,910	11,370	*12,230	7,570	8,900	5,590			7,030	4,460	8.85 m
	0 ft lb					*36,630	24,490	*26,510	16,340	19,190	12,060			15,490	9,850	29.04 ft
	-1.5 m kg	*7,690	*7,690	*11,840	*11,840	*16,890	11,300	12,310	7,460	8,830	5,520			7,600	4,810	8.36 m
	-5 ft lb	*17,240	*17,240	*26,870	*26,870	*36,620	24,320	26,490	16,100	19,040	11,930			16,790	10,620	27.38 ft
	-3.0 m kg	*13,970	*13,970	*19,530	*19,530	*15,900	11,420	*11,950	7,510	8,920	5,600			8,870	5,580	7.53 m
	-10 ft lb	*31,360	*31,360	*44,400	*44,400	*34,440	24,580	*25,840	16,210					19,690	12,380	24.61 ft
	-4.5 m kg			*18,650	*18,650	*13,580	11,730	*9,940	7,770					*9,330	7,380	6.24 m
	-15 ft lb			*40,150	*40,150	*29,170	25,300	*20,990	16,840					*20,590	16,600	20.23 ft
	7.5 m kg									*6,260	*6,260			*4,930	*4,930	7.96 m
	25 ft lb									*12,940	*12,940			*10,930	*10,930	25.82 ft
	6.0 m kg									*6,350	*6,350			*4,750	*4,750	8.82 m
	20 ft lb									*13,980	13,760			*10,490	*10,490	28.78 ft
	4.5 m kg							*7,540	*7,540	*6,940	6,230	*6,390	4,610	*4,750	4,300	9.36 m
	15 ft lb							*16,370	*16,370	*15,160	13,410	*12,690	9,890	*10,460	9,520	30.64 ft
Boom : 6.2 m, 20'34" Arm : 3.7 m, 12'2" Shoe : 800 mm, 32" CWT : 6,200 kg, 13,670 lb	3.0 m kg					*11,890	*11,890	*9,120	8,390	*7,780	5,990	7,020	4,500	*4,900	4,010	9.64 m
	10 ft lb					*25,580	*25,580	*19,750	18,100	*16,940	12,920	15,100	9,680	*10,780	8,870	31.60 ft
	1.5 m kg					*14,830	12,070	*10,690	7,950	*8,670	5,760	6,880	4,380	*5,200	3,910	9.67 m
	5 ft lb					*31,990	26,010	*23,150	17,150	*18,830	12,410	14,820	9,430	*11,460	8,630	31.74 ft
	0 m kg			*6,730	*6,730	*16,550	11,550	*11,860	7,630	8,890	5,570	6,780	4,280	*5,730	3,980	9.47 m
	0 ft lb			*15,390	*15,390	*35,800	24,880	*25,700	16,450	19,140	12,000	14,600	9,230	*12,630	8,770	31.07 ft
	-1.5 m kg	*6,940	*6,940	*10,930	*10,930	*17,040	11,360	12,320	7,460	8,770	5,460	*6,710	4,240	*6,590	4,240	9.01 m
	-5 ft lb	*15,520	*15,520	*24,780	*24,780	*36,940	24,450	26,480	16,080	18,880	11,770			*14,580	9,360	29.53 ft
	-3.0 m kg	*11,570	*11,570	*16,550	*16,550	*16,530	11,380	*12,260	7,430	8,760	5,450			7,660	4,810	8.25 m
	-10 ft lb	*25,970	*25,970	*37,550	*37,550	*35,800	24,490	26,430	16,030	18,890	11,780			16,970	10,660	26.98 ft
	-4.5 m kg	*17,310	*17,310	*21,140	*21,140	*14,860	11,580	*11,040	7,560					*8,730	6,030	7.10 m
	-15 ft lb	*39,050	*39,050	*45,580	*45,580	*32,020	24,940	*23,680	16,340					*19,290	13,490	23.07 ft
	-6.0 m kg			*15,590	*15,590	*11,030	11,030							*8,930	*8,930	5.29 m
	-20 ft lb			*32,890	*32,890	*23,030	23,030							*19,660	*19,660	16.85 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.

Equipment

STANDARD EQUIPMENT

Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4 final requirements
Air filter with indicator
Air intake heater
Cyclone pre-cleaner
Electric engine shut-off
Fuel filter and water separator
Delayed engine shutdown
Alternator, 80 A
Quick engine oil change system

Hybrid

Accumulator, 20 l (5.3 gal)
Boom regeneration valves
Assist motor
Main pump with PTO

Electric / Electronic control system

Advanced mode control system
Self-diagnostic system
Machine status indication
Engine speed sensing power control
Automatic idling system
Onetouch power boost
Safety stop/start function
Adjustable LCD color monitor
Master electrical disconnect switch
Engine restart prevention circuit
High-capacity halogen lights:
- Frame-mounted 2
- Boom-mounted 1
Extra work lights (Halogen):
- Cab-mounted 3
- Boom-mounted 1
Batteries, 2 x 12 V / 170 A
Start motor, 24 V / 5.5 kW
Travel alarm

Frame

Access way with handrail
Tool storage area
Punched metal anti-slip plates
Counterweight: 6,200 kg (13,670 lb)

Undercarriage

Undercover (heavy-duty)
Hydraulic track adjusters
Greased and sealed track link
Track Guard

Hydraulic system

Boom up swing priority function
Boom travel priority function (Creep)
Boom down speed control
Attachment management system (up to 32 programmable memories)
- Variable flow and pressure pre-setting
Hammer & shear, 2 pump flow
Additional return filter (Hammer & shear piping)
Boom float function without HRV
Straight travel pedal
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
Cylinder cushioning
Cylinder contamination seals
Auxiliary hydraulic valve
Automatic two-speed travel motors
Hydraulic oil, ISO VG 46
Quick hydraulic oil fill connection
Quick coupler piping

STANDARD EQUIPMENT

Cab and interior

ROPS (ISO 12117-2) certified cab
Opening top hatch
Silicon oil and rubber mounts with spring
Travel pedals and hand levers
Adjustable operator seat and joystick control console
Heater & airconditioner, automatic
Flexible antenna
Radio with MP3 & USB Jack with bluetooth
Hydraulic safety lock lever
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
Volvo smart view
Master key

Track shoes

800 mm (32") with triple grousers

Digging equipment

Linkage with lifting eye
Boom: 6.2 m (20'4") monoblock
Arm: 3.05 m (10'0")
Manual centralized lubrication

Machine controls

Dig Assist
Volvo Active Control (Semi-autonomous)

OPTIONAL EQUIPMENT

Engine

Block heater: 120 V, 240 V
Oil bath pre-cleaner
Diesel coolant heater, 10 kW
Water separator with heater
Auto engine shutdown
Reversible fan
Fuel filler pump: 50 l/min (13.2 gpm), with automatic shut-off

Electric

Extra work lights(LED):
- Cab-mounted 3
- Boom-mounted 1
- Counterweight-mounted 1
Green light beacon
Anti-theft system
Rotating warning beacon
Smart connect for tilt rotator
Tilt rotator 3rd gen
Dig assist, smart connect

Undercarriage

Full track guard
Track shoes
600/700/900 mm (24/28/36") with triple grousers
600 mm (24") HD with triple grousers
600/700 mm (24/28") with double grousers
High walker undercarriage

OPTIONAL EQUIPMENT

Hydraulic system

CDC, Comfort Driving Control

Hose rupture valve: boom

Overload warning device

Boom float function with HRV

Hydraulic piping:

- Slope & rotator

- Grapple

- Oil leak (drain) line

Volvo hydraulic quick coupler S2

Volvo hydraulic quick coupler U30 / U35

Volvo hydraulic quick coupler SQ70 55

Volvo hydraulic quick coupler SQ70

Hydraulic oil, biodegradable 46

Hydraulic oil, longlife oil 32

Hydraulic oil, longlife oil 46

Fuel tank-fast fuel fill prep

Hammer & shear, 1 pump flow

3 way selection valve

OPTIONAL EQUIPMENT

Cab and interior

Fabric seat with heater

Fabric seat with heater and air suspension

Deluxe seat

High-strength one piece front windshield (P5A)

Falling object guard, FOG (fixed type or hinge type)

Frame-mounted

Cab-mounted

Cab-mounted falling object protective structure (FOPS)

Side view camera

Smoker kit (ashtray and lighter)

Safety net for front window

Lower wiper with intermittent control

Anti-vandalism kit

Air pressure supply in cabin

Rear view camera

Control joysticks with 4 switches

Proportional joysticks with 3 switches

Digging equipment

Arm: 2.55 m (8'4") HD, 3.05 m (10'0") HD, 3.7 m (12'2")

Service

Tool kit, daily maintenance

Tool kit, full scale

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Deluxe seat



Reversible cooling fan



TiltRotator



Oil drain line



Swing out FOG





Volvo Construction Equipment
volvoce.com