

Volvo Excavators

# EC300E HYBRID



# Welcome to our world

Welcome to a world of industry leading machinery. A world where imagination, hard work and technological innovation will lead the way towards developing a future which is cleaner, smarter, and more connected. A world supported by the enduring values of the Volvo Group. A world of stability, sustainability and innovation. A world which we put our customers at the heart of.

Welcome to the world of Volvo Construction Equipment – we think you're going to like it here.

### Working harder, working smarter

For over 180 years Volvo has been a pioneer in the design and manufacture of machines which set the standard for efficiency, performance and uptime. Across our range of excavators, wheel loaders and haulers, our reputation for engineering excellence is unrivalled, which means whatever your operation or application, we can provide a total fleet solution to help you succeed.

Building on our proud history, the Volvo Concept Lab continues to create cutting-edge ideas and innovative concepts, to ensure we offer customers machines which work harder and smarter long into the future.



### Solutions for you

Our industry leading machines are just the start of your relationship with Volvo. As your partner, we have developed an extensive range of additional solutions to help you improve uptime, boost productivity and reduce costs.

### Designed for your business

Structured across nine blocks, our portfolio of products and services are designed to complement your machine's performance and boost your profitability. Simply put, we offer some of the best guarantees, warranties and technological solutions in the industry today.

### There when you need us

Whether you're buying new or used, our global network of dealers and technicians offer around-the-clock support, including machine monitoring and world-class parts availability. It's the basis of everything offered by Volvo Services, so you can be confident we've got you covered right from the start.







Productivity



Safety



Financial Services



Uptime Services



Rental Services

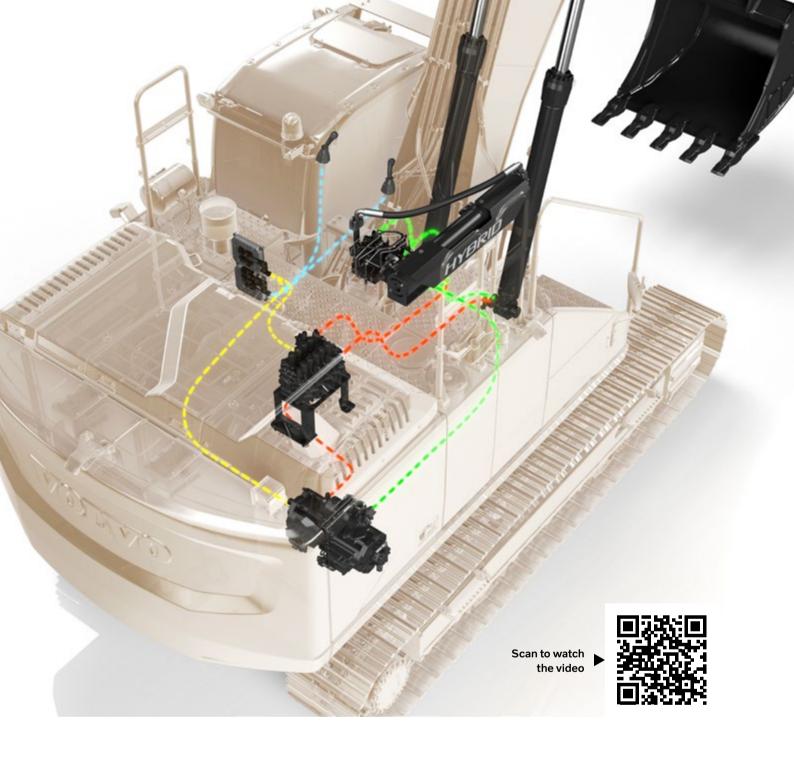




**Volvo Parts** 



### **BUILDING TOMORROW**



# 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 powers the engine system.

The result is up to 17%\* increase in fuel efficiency while delivering all the power and performance you would expect from a conventional EC300E.

 ${}^\star \mathsf{Efficiency}$  and savings may vary based on operator, application and conditions.



17% greater fuel efficiency\*



15% lower fuel consumption\*



15% reduction in CO<sub>2</sub> emissions\*



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  $CO_2$  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 (in³)	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 simulaneously.

### 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 / 120
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	0	35

### Sound Level

Sound Level		
Sound pressure level in cab according to I	SO 6396	
$L_pA$	dB	70
External sound level according to ISO 63 2000/14/EC	95 and EU Noise Directive	
Lwa	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)
Pilot pump, Type Gear Pump		
Maximum flow	l/min (gal/min)	20.3 (5.4)
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

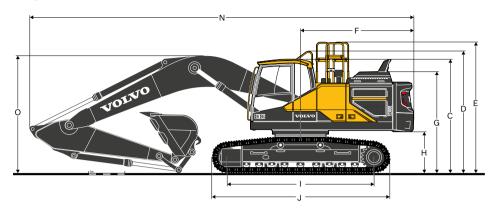
### **Hydraulic Cylinders**

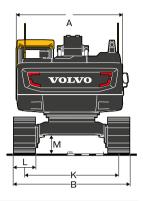
Mono boom		2
Bore x Stroke	ø x mm (ø x in)	140 x 1 480 (5.5 x 58.3)
Arm		1
Bore x Stroke	ø x mm (ø x in)	150 x 1 745 (5.9 x 68.7)
Bucket		1
Bore x Stroke	ø x mm (ø x in)	140 x 1 140 (5.5 x 44.9)

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**

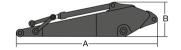




DIMENSIONS								
Description	U	nit	EC300EL Hybrid 6.2, 20'4"					
Boom	m,	ft in						
Arm	m	ft in	2.55	8'4"	3.05	10'0"	3.7	12'2"
A. Overall width of upper structure	mm	ft in	2,890	9'6"	2,890	9'6"	2,890	9'6"
B. Overall width	mm	ft in	3,190	10'6"	3,190	10'6"	3,190	10'6"
C. Overall height of cab	mm	ft 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"

<sup>\*</sup> Without shoe grouser





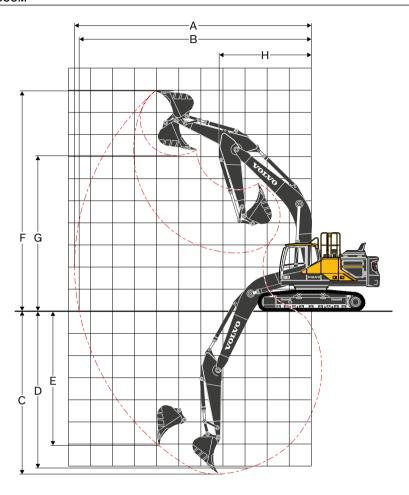
DIMENSIONS						
Description Unit mono						
Boom	m,	ft in	6.2, 20'4" GP 6.2, 20'4" HD			
Length	mm	ft in	6,425	21'1"	6,425	21'1"
Height - Hose	mm	ft in	1,780	5'10"	1,780	5'10"
Height - Pipe	mm	ft in	1,665	5'6"	1,665	5'6"
Width	mm	ft in	765	2'6"	765	2'6"
Weight	kg	lb	2,505	5,520	2,735	6,030

* Includes cylinde	er, piping and	pin, excludes boom cylinder pin
D	1114	

Description	n Unit										
Arm	m,	ft in	2.55, 8	3'4" HD	3.05, 1	0'0" GP	3.05, 10	0'0" 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	

<sup>\*</sup> Includes cylinder, linkage and pin

<sup>&#</sup>x27; 2-piece boom



WORKING RANG	ES													
Description			U	nit	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 re	ach		mm	ft in	10,180	33'5"	10,710	35'2"	11,310	37'1"				
B. Max. digging re	each on ground		mm	ft in	9,970	32'9"	10,520	34'6"	11,130	36'6"				
C. Max. digging de	epth		mm	ft in	6,840	22'5"	7,340	24'1"	7,990	26'3"				
D. Max.digging de	epth (I = 2.44 m / 8'0	O" level)	mm	ft in	6,600	21'8"	7,150	23'5"	7,830	25'8"				
E. Max. vertical wall digging depth				ft in	5,320	17'5"	6,080	19'11"	6,680	21'11"				
F. Max. cutting height				ft in	9,560	31'4"	9,980	32'9"	10,260	33'8"				
G. Max. dumping height				ft in	6,680	21'11"	7,040	23'1"	7,330	24'1"				
H. Min. front swin	g radius		mm	ft in	4,220	13'10"	4,180	13'9"	4,240	13'11"				
DIGGING FORCE	S WITH DIRECT FIT	Г ВИСКЕТ												
Bucket radius			mm	in	1,624	64"	1,624	64"	1,624	64"				
	Normal	SAE J1179	kN	lb	165	37,050	165	37,050	165	37,040				
Breakout force	Power boost	SAE JII/9	kN	lb	179	40,320	179	40,320	179	40,310				
breakout force	Normal	ISO 6015	kN	lb	190	42,680	190	42,680	190	42,670				
	Power boost	130 6015	kN	lb	207	46,450	207	46,450	207	46,440				
	Normal	SAE J1179	kN	lb	158	35,500	133	29,790	116	26,090				
Tearout force	Power boost	SAE JIII'S	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	130 0015	kN	lb	177	39,810	148	33,250	129	28,980				
Rotation angle, bu	cket			0	1	79	17	79	1	79				

# **Specifications**

MACHINE WEIGHTS	AND GROUND PRE	SSURE						
Description	Shoe v	width	Operation	ng weight	Ground	pressure	Overa	ll width
	mm	in	kg	lb	kPa	psi	mm	in
EC300EL Hybrid								
			1,209 kg (2			, 3.05 m (10'0" ucket, 6,200 kç		unterweight
	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"
Triple grouser	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"
			1,209 kg (2			, 3.05 m (10'0" ucket, 6,200 kg		unterweight
	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"
Triple grouser	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"

										EC300EL Hybrid	
Bucket type	e	Capa	acity	Cutting	y width	We	ight	Teeth	600 mm (24	1") shoe, 6,200 k	g (13,670 lb)
71						:			6.2	m (20'4") GP Bo	om
		L	yd <sup>3</sup>	mm	in	kg	lb	EA	2.55 m (8'4")	3.05 m (10'0")	3.7 m (12'2")
		550	0.72	600	23.6	883	1,946	3	С	С	С
		660	0.86	750	29.5	867	1,912	3	С	С	С
		770	1.01	900	35.4	996	2,197	4	С	С	С
		950	1.24	1,090	42.9	1,025	2,260	4	С	С	С
		1,140	1.49	1,240	48.8	1,192	2,629	5	С	С	С
	General	1,320	1.73	1,390	54.7	1,209	2,666	5	С	С	С
	purpose	1,450	1.90	1,490	58.7	1,270	2,799	5	С	С	С
		1,510	1.98	1,540	60.6	1,314	2,897	5	С	С	С
		1,760	2.30	1,740	68.5	1,448	3,193	6	С	С	В
Direct fit bucket		1,930	2.52	1,840	72.4	1,529	3,370	6	С	С	В
bucket		2,060	2.69	1,950	76.8	1,590	3,506	6	С	В	А
		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
	Heavy duty	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	В
		1,930	2.52	1,840	72.4	1,623	3,578	6	С	В	А
		550	0.72	600	23.6	883	1,946	3	С	С	С
		660	0.86	750	29.5	867	1,912	3	С	С	С
		770	1.01	900	35.4	996	2,197	4	С	С	С
		950	1.24	1,090	42.9	1,025	2,260	4	С	С	С
		1,140	1.49	1,240	48.8	1,192	2,629	5	С	С	С
	General	1,320	1.73	1,390	54.7	1,209	2,666	5	С	С	С
	purpose	1,450	1.90	1,490	58.7	1,270	2,799	5	С	С	С
Discort Ct		1,510	1.98	1,540	60.6	1,314	2,897	5	С	С	В
Direct fit bucket		1,760	2.30	1,740	68.5	1,448	3,193	6	С	В	А
(UQC		1,930	2.52	1,840	72.4	1,529	3,370	6	В	В	А
interface)		2,060	2.69	1,950	76.8	1,590	3,506	6	В	А	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
	Heavy duty	1,320	1.73	1,390	54.7	1,301	2,868	5	D	D	С
		1,510	1.98	1,540	60.6	1,387	3,058	5	D	D	В
		1,690	2.21	1,690	66.5	1,485	3,274	5	D	В	А
		1,930	2.52	1,840	72.4	1,623	3,578	6	В	А	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.

Ма	aximum materal density											
	kg/m³	lb/yd³										
Α	1,200~1,300	2,000~2,200	Coal, Caliche, Shale									
В	1,400~1,600	2,300~2,700	Wet earth and clay, Limestone, Sandstone									
С	1,700~1,800	2,800~3,100	Granite, Wet sand, Well blasted rock									
D	> 1,900	> 3,200	Wet mud, Iron ore									
Х	Not recommend	ded										

## **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

	1.161	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	n, 30 ft	M	ax. Read	ch
	Lifting Point	Along	Across	Along	Across		Across	Along	Across	Along	Across		Across		Across	Max.
	7.5 m kg	UC	UC	UC	UC	UC	UC	*7,740	*7,740	UC	UC	UC	UC	*7,900	7,640	6.52 n
	25 ft lb							,	*17,180					*17,450	17,300	21.04
	6.0 m kg								*8,080	*7.890	6,040			*7,900		7.55 m
	20 ft lb							*17,660		.,	-,			*17,420		24.60
	4.5 m kg					*11.410	*11,410	*9,190	8,330	*8,220	5,930			7,940	5,160	8.18 n
	15 ft lb					,	,	*19,940	,	*17,970	12,770			17,600	11,440	26.76
Boom :	3.0 m kg							*10,630		*8,890	5,740			7,370	4,760	8.50 r
6.2 m, 20'34"	10 ft lb						,	*23,000		19,250	12,390			16,280	10,520	27.86
Arm : 2.55 m, 8'4"	1.5 m kg					*16,750	11,340	*11,900	7,590	8,740	5,570			7,220	4,630	8.54 r
Shoe:	5 ft lb							*25,760		18,830	12,020			15,910	10,220	28.01
600 mm, 24"	0 m kg					*17,340	11,140	12,030	7,390	8,610	5,450			7,440	4,750	8.31r
CWT:	0 ft lb					*37,580	23,990	25,890	15,940	18,560	11,770			16,410	10,480	27.25
6,200 kg, 13,670 lb	-1.5 m kg			*12,880	*12,880		11,150	11,970	7,340	8,590	5,430			8,170	5,190	7.78 r
	-5 ft lb			*29,370	*29,370	*36,700	24,000	25,760	15,830	18,530				18,050	11,470	25.48
	-3.0 m kg			*21,080	*21,080	*15,540	11,310	*11,740	7,430					9,850	6,200	6.88 r
	-10 ft lb							*25,310	16,040					*21,770	13,770	22.46
	-4.5 m kg				*16,820									*10,110	8,870	5.44 r
	-15 ft lb				*36,120									*22,290		17.54
	7.5 m kg													*6,380	*6,380	7.20 n
	25 ft lb													*14,340	*14,340	23.32
	6.0 m kg									*7,240	6,130			*6,120	5,320	8.15 m
Boom : 6.2 m, 20'34" Arm :	20 ft lb									*15,950	13,210			*13,690	11,880	26.57
	4.5 m kg					*10,280	*10,280	*8,540	8,440	*7,710	5,990			*6,120	4,680	8.73 n
	15 ft lb							*18,510	18,210	*16,850	12,910			*13,640	10,370	28.58
	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 r
	10 ft lb					*28,820	26,210	*21,680	17,250	*18,410	12,450			*14,080	9,600	29.61
3.05 m, 10'0"	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 n
Shoe :	5 ft lb					*34,380	24,510	*24,710	16,380	18,840	12,000			14,540	9,340	29.76
600 mm, 24"	0 m kg					*17,170	11,140	12,040	7,390	8,600	5,430			6,770	4,330	8.85 r
CWT : 6,200 kg, 13,670 lb	0 ft lb					*36,920	23,730	25,780	15,820	18,470	11,670			14,920	9,530	29.04
0,200 kg, 10,010 kg	-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 r
	-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
	-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 n
	-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
	-4.5 m kg			*18,990	*18,990	*13,800	11,450	*10,080	7,560					*9,460	7,180	6.24 n
	-15 ft lb			*40,570	*40,570	*29,460	24,520	*21,200	16,310					*20,800	16,080	20.23
	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
	6.0 m kg									*6,390	6,170			*4,750	4,660	8.82 n
	20 ft lb									*14,060				*10,490	10,370	28.78
	4.5 m kg							*7,580	*7,580	*6,980	6,010	*6,390	4,450	*4,750	4,150	9.36 n
	15 ft lb							*16,450	*16,450	*15,260	12,940	*12,690	9,550	*10,460	9,190	30.64
D	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 n
Boom : 6.2 m, 20'34"	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
Arm :	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 n
3.7 m, 12'2"	5 ft lb							*23,320	16,580	18,840		14,250	9,110	*11,460	8,340	31.74 1
Shoe :	0 m kg			*6,730		*16,680		*11,960	7,380	8,550	5,380	6,520	4,140	*5,730	3,840	9.47 n
600 mm, 24" CWT :	0 ft lb							*25,910		18,410			8,920	*12,630	8,480	31.07
6,200 kg, 13,670 lb	-1.5 m kg							11,870	7,220	8,440	5,280	6,480	4,100	6,470	4,100	9.01 n
, 3, -,	-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
	-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 r
	-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
	-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
	-6.0 m kg			*15,770	*15,770	*11,150	*11,150							*9,030	*9,030	5.29 n
																16.85

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.

For lifting capacity inc			, 5 ft	1	1, 10 ft		, 15 ft	1	, 20 ft	1	, 25 ft	<u> </u>	1, 30 ft	1	1ax. Rea	
	Lifting	Along	Across		Across	Along	· -		Across	1	Across	Along	í	_	Across	
	Point	UC	UC	UC	UC	UC	UC	UC	UC	UC	UC	UC	UC	UC	UC	Max.
	7.5 m kg							*7,700	*7,700					*7,860	*7,860	6.52 n
	25 ft lb							*17,100							*17,360	21.04 f
	6.0 m kg	_						,	,	*7,840	6,240			*7,850		7.55 m
	20 ft lk							*17,570						*17,300		24.60
	4.5 m kg	-				,	*11,350	*9,140	8,620	*8,160	6,130			*7,990	5,340	8.18 m
Boom:	15 ft lk							*19,820		*17,850	13,210			*17,610	11,830	26.76 f
6.2 m, 20'34"	3.0 m kg							*10,560		*8,820	5,940			7,660	4,920	8.50 m
Arm :	10 ft lk	)						*22,840		*19,200				16,910	10,870	27.86 f
2.55 m, 8'4"	1.5 m kg					*16,620	,	*11,810	7,840	9,080	5,750			7,490	4,790	8.54 n
Shoe: 800 mm, 32"	5 ft lb							*25,560		19,560	12,420			16,530	10,560	28.011
CWT:	0 m k					*17,200	,	12,490	7,630	8,940	5,630			7,730	4,910	8.31 m
6,200kg, 13,670 lb	Oft Ib					*37,270		26,870	16,460	19,270	12,150			17,040	10,830	27.25 f
	-1.5 m kg	•			*12,880		11,490	12,420	7,570	8,920	5,610			8,480	5,360	7.78 m
	-5 ft lb				*29,370			26,720	16,330	19,230	12,120			18,740	11,840	25.481
	-3.0 m k	_			*20,880	,		*11,630	7,660					*9,770	6,400	6.88 m
	-10 ft lb							*25,080	16,550						14,210	22.46
	-4.5 m kç	-			*16,640									*10,010		5.44 m
	-15 ft lb	)		*35,730	*35,730	*26,450	25,950							*22,050		17.54 f
	7.5 m kg	•												*6,470		7.20 m
	25 ft lb													*14,340	*14,340	23.32 f
	6.0 m kg	9								*7,190	6,360			*6,200	5,510	8.15 m
	20 ft lb	)								*15,850	13,670			*13,690	12,290	26.57 f
Boom : 6.2 m, 20'34"	4.5 m kg	9				*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 f
	3.0 m kg	9				*13,320	12,550	*9,950	8,270	*8,390	5,970	*6,680	4,520	*6,400	4,500	9.03 m
Arm :	10 ft 1k	)				*28,630	27,100	*21,540	17,850	*18,270	12,880			*14,080	9,930	29.61 fl
3.05 m, 10'0"	1.5 m kg	9				*15,820	11,730	*11,320	7,840	9,080	5,750	6,930	4,420	*6,830	4,380	9.07 m
Shoe:	5 ft lb	)				*34,120	25,310	*24,520	16,940	19,570	12,400			*15,030	9,650	29.76 fl
800 mm, 32" CWT:	0 m kg	9				*16,910	11,370	*12,230	7,570	8,900	5,590			7,030	4,460	8.85 m
6,200 kg, 13,670 lb	Oft Ib	)				*36,630	24,490	*26,510	16,340	19,190	12,060			15,490	9,850	29.04 f
0,200 Ng, 10,010 N	-1.5 m kg	y *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 kç	*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	9		*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 f
	7.5 m kg	3								*6,260	*6,260			*4,930	*4,930	7.96 m
	25 ft lb	)								*12,940	*12,940			*10,930	*10,930	25.82 f
	6.0 m kg	3								*6,350	*6,350			*4,750	*4,750	8.82 m
	20 ft 1k	)								*13,980	13,760			*10,490	*10,490	28.78 f
	4.5 m kg	3						*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 f
	3.0 m kg	3				*11,890	*11,890	*9,120	8,390	*7,780	5,990	7,020	4,500	*4,900	4,010	9.64 m
Boom:	10 ft 1k					*25,580	*25,580	*19,750	18,100	*16,940	12,920	15,100	9,680	*10,780	8,870	31.60 f
6.2 m, 20'34" Arm :	1.5 m kg	9				*14,830	12,070	*10,690	7,950	*8,670	5,760	6,880	4,380	*5,200	3,910	9.67 m
3.7 m, 12'2"	5 ft lb							*23,150		*18,830		14,820		*11,460	8,630	31.74 ft
Shoe:	0 m k			*6,730	*6,730					8,890		6,780	4,280	*5,730	3,980	9.47 m
800 mm, 32"	Oft Ib			*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
CWT:	-1.5 m kg	*6,940	*6,940	*10,930	*10,930	*17,040	11,360	12,320	7,460	8,770	5,460		4,240	*6,590		9.01 m
6,200 kg, 13,670 lb		*15,520							,	18,880	11,770				9,360	29.53 f
		*11,570								8,760	5,450			7,660	4,810	8.25 m
	,	*25,970								18,890	11,780			,	10,660	
		*17,310							7,560	,	, ,			*8,730		7.10 m
		*39,050													13,490	
	-6.0 m kg		20,000		*15,590			_0,000	.5,5 10						*8,930	
	-20 ft lb				*32,890										*19,660	
													nd ISO 1			10.001

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

#### Hvbrid

Accumulator, 20 I (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 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

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

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

### **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

Propotional 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







### Oil drain line



Swing out FOG



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.

### V O L V O