

Volvo Construction Equipment  
Building Tomorrow



# EC300E

Volvo Excavators 30.1-36.9 t 253 hp



# 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.

**BUILDING TOMORROW**

# Giving you more

The new and enhanced EC300E is packed with the latest technology to help you move more, for less. Features including the new Volvo engine, improved hydraulics, flow priority functions and optional Dig Assist apps deliver optimum productivity, efficiency and performance for a lower cost per ton.

## More productivity

Get more done in the EC300E. An increase in engine power and improved hydraulic performance contributes to faster cycle times, while a 700 kg heavier counterweight provides superb stability and a 5% increase in across lifting capacity. Machine productivity is further enhanced by new motion priority functions, boom down speed control and improved jack up speed.



## More precision

Unlock the full potential of your machine's productivity with Dig Assist, powered by the 10" Volvo Co-Pilot display. Gain access to a set of smart apps, including 2D, In-Field Design, 3D software packages, On-Board Weighing and Volvo Active Control, designed to optimize the digging process.



## More control

Double your productivity with Volvo Active Control functions. The working day just got easier with automated boom and bucket movements, making the digging process more accurate and twice as fast. Simply set the grade from the Volvo Co-Pilot display, push the button and get to work – all controlled using a single lever.



## More responsiveness

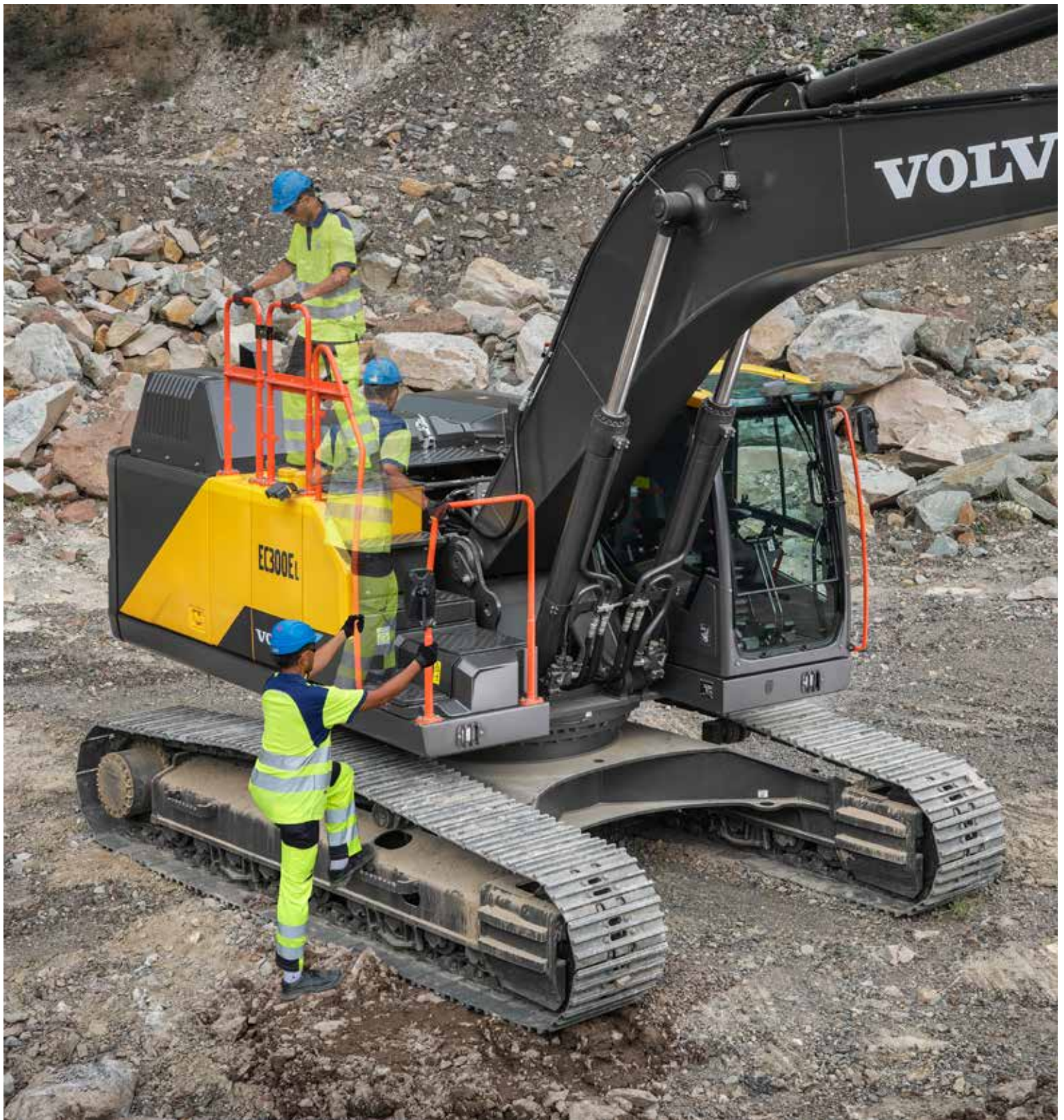
With electric control joystick and full electric travel pedals, operators benefit from an improved response time. Machine controllability is enhanced further by Boom/Swing and Boom/Travel priority functions which enable operators to prioritize one function over another. Operators can also easily adjust the boom down speed, ideal for precision tasks which require optimum control.





# MORE FUEL EFFICIENCY

A range of features combine in the EC300E to deliver up to 10% improvement in fuel efficiency. The new D8M Volvo engine reduces rated rpm from 1800 down to 1600, while also delivering a 5% increase in power, and the intelligent new generation electro-hydraulic system provides on-demand flow and reduces internal losses in the hydraulic circuit. Classic Volvo features such as ECO mode and selectable work modes further contribute to outstanding fuel efficiency.



# SAFETY, INSIDE AND OUT

Operators can access the upper structure with safety and confidence thanks to the new 3-point right-hand side access. Industry renowned features such as bolted anti-slip steps, high visibility handrails and spacious, ergonomic and low-noise Volvo Care Cab ensure the highest levels of operator comfort and safety.

# For your comfort and safety

With a host of new and proven features including enhanced machine access, superior visibility, bouncing reduction technology and customizable settings, the upgraded EC300E delivers all the safety and comfort you would expect from your Volvo machine.

## Know your limits

With Volvo Active Control, operators can easily set swing fence, height limit and depth limit from the Volvo Co-Pilot. This helps to avoid contact with side obstacles, overhead obstacles such as power lines and underground hazards such as pipes and cables.



## See it all

Operators benefit from outstanding visibility thanks to rear and side-view cameras. Furthermore, the optional Volvo Smart View uses front, rear and side cameras to provide a real-time, overhead view of the machine, resulting in safer machine rotation while working, especially in confined spaces.



## A smoother shift

New boom and arm bouncing reduction technology reduces machine shock, resulting in a more comfortable and productive operator performance. Comfort Drive Control further helps to reduce fatigue by enabling operators to steer the machine using the joystick rollers instead of the pedals.



## How you like it

Get ready for the working day in no time with customizable settings, including preferred control patterns easily selected from the monitor. New 'long push' functionality on the joystick allows operators to set an additional shortcut function, and with the L8 joystick operators can create a shortcut to hydraulic priority functions.



# Boost versatility

Get the most out of your excavator with our range of purpose-built attachments, designed to work in perfect harmony with your machine. Customize your EC300E with quality Volvo attachments, matched to your needs, to form one solid and reliable unit that delivers improved cycle times and increased fuel efficiency.

## Buckets of productivity

Volvo buckets are the perfect tool to achieve maximum productivity when digging and re-handling in all conditions. Whether you are working with soft, medium or hard materials, our buckets deliver long life and feature original Volvo wear parts. Heavy-Duty variants provide optimum performance when digging in compact materials.



## Take a break

Available with a full range of tools, the HB-Series of hydraulic breakers are designed to be a perfect match for your Volvo. Powered by the machine's constant auxiliary hydraulic flow, the breakers are configured to the specific weights of Volvo machines and are fully compatible with Volvo quick couplers for swift, safe and simple attachment changes.



## Dig at any angle

Boost productivity and dig at any angle. Compatibility with SMP®, OilQuick®, Steelwrist®, Engcon® and Rototilt® tiltrotators provides the flexibility needed for precise construction jobs. The factory-fitted preparation system gives you the power to control both the excavator and tiltrotator using the original joysticks, with the information presented on the main display.



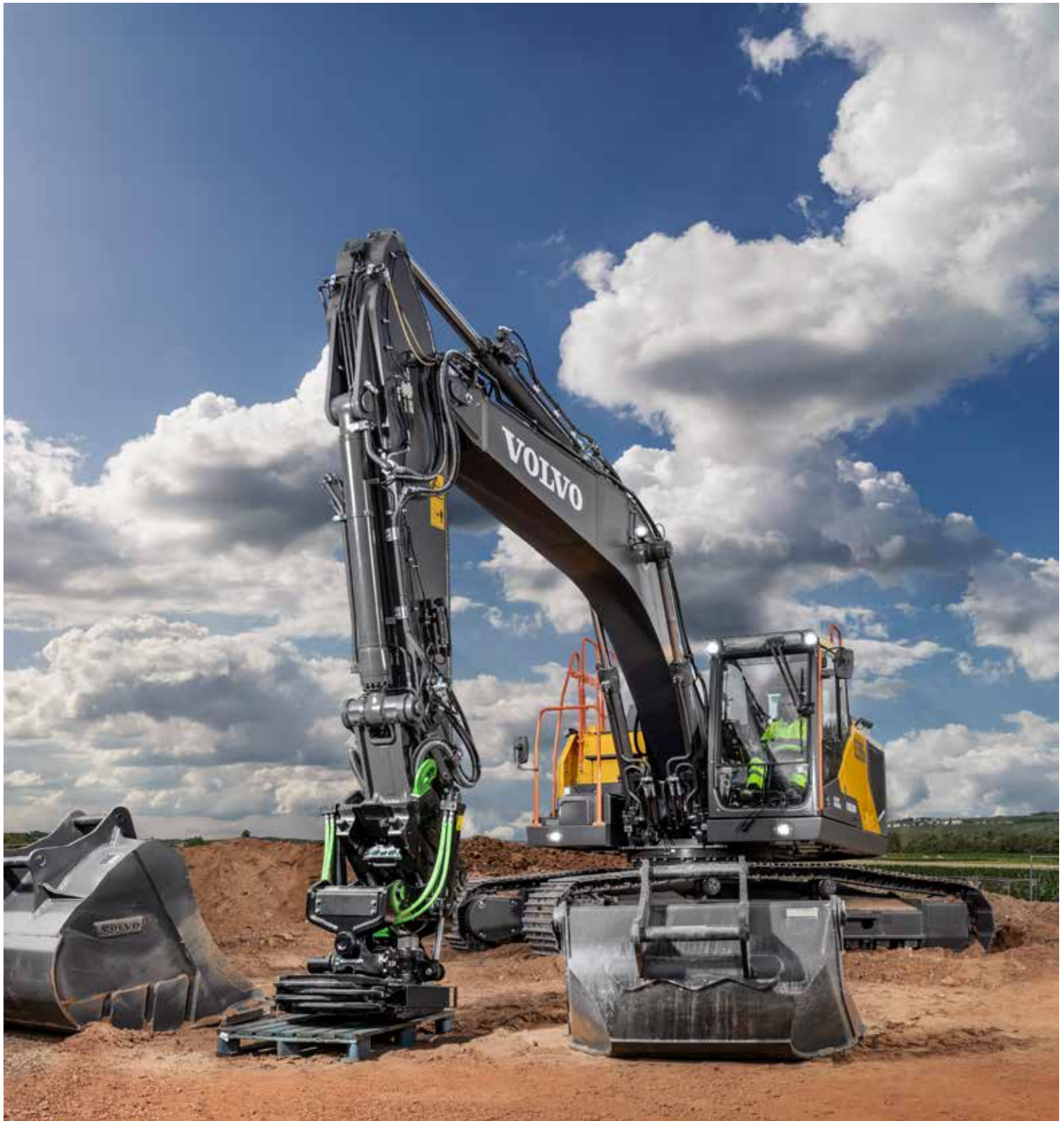
## Stay cool

A new cooling layout increases hydraulic attachment cooling capacity by 10%, resulting in an improved attachment performance.



SMP® is a registered trademark from SMP Parts AB, OilQuick® is a registered trademark from OilQuick AB, Steelwrist® : Steelwrist is a registered trademark of Steelwrist AB, Engcon® : Engcon is a registered trademark of Engcon Holding AB, Rototilt® : Rototilt is a registered trademark of Rototilt Group AB





# EASILY ATTACH

Discover our range of Volvo quick couplers, including the new Steelwrist® Auto Connect Quick Coupler – enabling the quick and easy connection of hydraulic attachments from the comfort and safety of the cab. The quick coupler delivers 300 liters per minute of hydraulic flow directly to the attachment.



# POWERED BY EXCELLENCE

With impressively high torque at low rpm, the new D8M Volvo engine builds on generations of proven Volvo engine technology to deliver superior reliability and performance. The engine features auto-regeneration technology, while auto-engine idle and auto-engine shutdown reduce unnecessary fuel consumption and wear.

# Lower maintenance costs

Durable by design, the new EC300E is ready to take on the toughest applications. The machine delivers outstanding levels of reliability and with features including engine auto-regeneration, reinforced components and reduced maintenance requirements, you can count on the EC300E to maximize uptime while keeping maintenance costs to a minimum.

## Less service requirements

The new electro-hydraulic system requires less hoses, therefore reducing the need for couplings, minimizing maintenance requirements and increasing reliability. Engine oil and engine oil filter change intervals have been doubled to 1000 hours, further ensuring the time and cost spent on maintenance is kept to a minimum.

## Easier UREA filling

The new splash guard on the UREA tank makes filling quicker and easier, while also reducing the risk of spillage and subsequent corrosion.



## Up to the challenge

Built to deliver outstanding strength and durability, this heavy-duty production machine features a robust undercarriage with reinforced idle frame, track links and bottom rollers. Reinforced bucket linkage with steel strip, optional heavy-duty superstructure undercover and easily replaced bolt-on wear plates at the arm end ensure the excavator succeeds even on the toughest of jobsites.



# Boost your profits

A world-class machine is just the start of how Volvo strives to add value you to your operation. Our portfolio of services is designed to complement your machine's performance and boost your profitability.

## Every part counts

Maintain productivity and machine uptime with our range of readily available, tested and approved parts – all backed by Volvo warranty. Only by using Genuine Volvo Parts, can you protect your investment, extend machine life and guarantee long-lasting performance.



## Maintain performance

Stay on track with planned servicing and keep your asset covered with our range of flexible maintenance and repair options.



## Powerful reporting

Keep track of your fleet with a comprehensive portfolio of reports, designed to help you take action and boost the profitability of your business. Powered by the CareTrack telematics system, Productivity Report, Fuel Efficiency Report & Summary Report each provide an easy-to-digest overview of your machine's condition and performance.



## Machine monitoring made easy

Maximize machine uptime and reduce repair costs with the CareTrack telematic system. Choose to keep track of your machine yourself or let us take care of it with Volvo Active Care. Our Volvo Uptime Center will provide 24/7 machine monitoring, supplying weekly reports and notifying you should preventive maintenance action be required.





# GET THE MOST FROM YOUR MACHINE

While reliable and efficient machines of course play a vital role in reducing costs, enhancing safety and maximizing productivity, it is ultimately the performance of the operator that really makes the difference. We offer a wide range of training initiatives to help operators unlock the full capability of their Volvo excavator.

# Move more for less

## Boost versatility

- Steelwrist® Auto Connect Quick Coupler **NEW**
- Factory-fitted preparation for SMP®, OilQuick®, Steelwrist®, Engcon®, Rototilt® tiltrotator control systems **NEW**
- 10% more hydraulic attachment cooling capacity **NEW**
- Range of matched Volvo buckets and breakers
- Attachment Management System: 32 attachments stored

## BOOST YOUR PRODUCTIVITY

- 700kg heavier counterweight: 5% increase in across lifting capacity **NEW**
- Improved response time **NEW**
- Boom/Swing and Boom/Travel priority **NEW**
- Adjustable boom down speed **NEW**
- Dig Assist apps, powered by Volvo Co-Pilot
- Volvo Active Control: double your productivity



## UP TO 10% BETTER FUEL EFFICIENCY

- Volvo D8M engine **NEW**
- New generation electro-hydraulic system **NEW**
- ECO mode
- Selectable work modes
- Boom float function
- Auto-engine idle and shutdown

For a dramatic improvement in fuel efficiency, look no further than the EC300E Hybrid.

## LOWER MAINTENANCE COSTS

- Less hydraulic hoses: reduced need for couplings/oil **NEW**
- Splash guard on the UREA tank **NEW**
- 1000hr engine oil and engine oil filter change intervals **NEW**
- Engine auto-regeneration **NEW**
- Grouped filters, accessed from ground-level
- Reinforced idle frame, track links, bottom rollers



## SAFETY, INSIDE AND OUT

- 3-point right-hand side access to the upper structure **NEW**
- Bolted anti-slip steps, high visibility handrails
- ROPS cab, low-noise/vibration
- Rear and side cameras, Volvo Smart View
- Swing fence, height/depth limits functions (Volvo Active Control)

## COMFORTABLE OPERATION

- Boom and arm bouncing reduction **NEW**
- Comfort Drive Control: joysticks steering **NEW**
- Additional 'long push' shortcut button **NEW**
- Selectable control pattern
- Volvo Care Cab: highest levels of comfort

### Volvo Services: boost your profits

- Operator training program
- Productivity Report, Fuel Efficiency Report, Summary Report
- Volvo Active Care: 24/7 machine monitoring
- Genuine Volvo Parts
- Maintenance and repair agreements

# Volvo EC300E 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, high-pressure fuel injectors, turbo charger and intercooler, and electronic engine controls to optimize machine performance.

Engine	Volvo	D8M
Max power at	r/min	1 600
Net, ISO 9249/SAE J1349	kW	188
	hp	256
Gross, ISO 14396/SAE J1995	kW	189
	hp	257
Max torque	Nm	1 290
at engine speed	r/min	1 400
No. of cylinders		6
Displacement	l	7.7
Bore	mm	110
Stroke	mm	135

## 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	203.2
Shoe width	mm	600 / 700 / 800 / 900
Shoe width, triple grouser	mm	600 / 700 / 800 / 900
Shoe width, triple grouser (HD)	mm	600
Shoe width, double grouser	mm	700
Bottom rollers		2 x 9
Top rollers		2 x 2

## 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	114.8

## 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	248
Max. travel speed (low)	km/h	3.6
Max. travel speed (high)	km/h	5.4
Gradeability	°	35

## 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 CO<sub>2</sub>-eq.

## 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	2 x 276
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### Pilot pump, Type Gear Pump

Maximum flow	l/min	20.3
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### Relief value setting pressure

Implement	MPa	33.3 / 36.3
Travel circuit	MPa	36.3
Slew circuit	MPa	28.9
Pilot circuit	MPa	3.9

## 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	140 x 1 480
2 piece boom		2
Bore x Stroke	ø x mm	170 x 1 300
Arm		1
Bore x Stroke	ø x mm	150 x 1 745
Bucket		1
Bore x Stroke	ø x mm	140 x 1 140
Bucket for LR boom		1
Bore x Stroke	ø x mm	100 x 865

## Service Refill

Fuel tank	l	472
DEF/AdBlue® tank	l	50
Hydraulic system, total	l	385
Hydraulic tank	l	215
Engine oil	l	30
Engine coolant	l	44
Slew reduction unit	l	6.1
Travel reduction unit	l	2 x 6

## Sound Level

Sound pressure level in cab according to ISO 6396

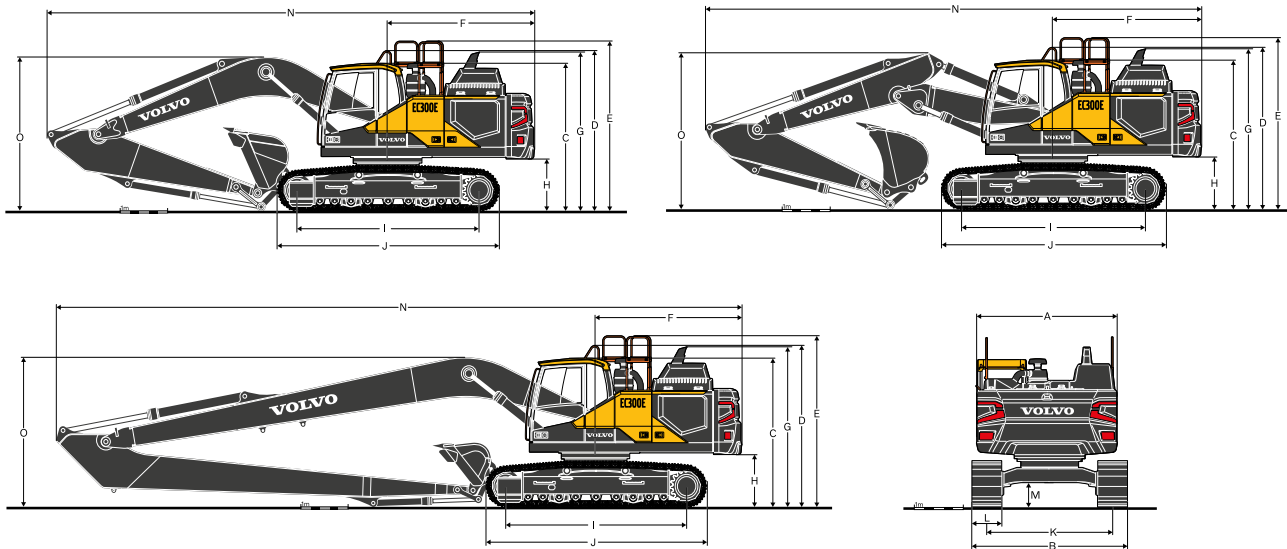
L <sub>pA</sub>	dB	70
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External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

L <sub>WA</sub>	dB	104
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# Specifications



Description	Unit	EC300EL			EC300ENL			EC300EL/EC300ENL			EC300ELR
Boom	m	6.2			6.2			6.2 2-piece			10.2
Arm	m	2.55	3.05	3.7	2.55	3.05	3.7	2.55	3.05	3.7	7.9
A. Overall width of upper structure	mm	2 890	2 890	2 890	2 890	2 890	2 890	2 890	2 890	2 890	2 890
B. Overall width	mm	3 190	3 190	3 190	2 990	2 990	2 990	3 190 / 2 990	3 190 / 2 990	3 190 / 2 990	3 190
C. Overall height of cab	mm	3 110	3 110	3 110	3 110	3 110	3 110	3 110	3 110	3 110	3 110
D. Overall height of handrail	mm	3 360	3 360	3 360	3 360	3 360	3 360	3 360	3 360	3 360	3 360
E. Overall height of guardrail (Unfolded)	mm	3 570	3 570	3 570	3 570	3 570	3 570	3 570	3 570	3 570	3 570
E'. Overall height of handrail/guardrail (Folded)	mm	3 090	3 090	3 090	3 090	3 090	3 090	3 090	3 090	3 090	3 090
F. Tail swing radius	mm	3 120	3 120	3 120	3 120	3 120	3 120	3 120	3 120	3 120	3 155
G. Overall height of diffuser	mm	3 200	3 200	3 200	3 200	3 200	3 200	3 200	3 200	3 200	3 200
H. Counterweight clearance *	mm	1 105	1 105	1 105	1 105	1 105	1 105	1 105	1 105	1 105	1 105
I. Tumbler length	mm	4 015	4 015	4 015	4 015	4 015	4 015	4 015	4 015	4 015	4 015
J. Track length	mm	4 865	4 865	4 865	4 865	4 865	4 865	4 865	4 865	4 865	4 865
K. Track gauge	mm	2 590	2 590	2 590	2 390	2 390	2 390	2 590 / 2 390	2 590 / 2 390	2 590 / 2 390	2 590
L. Shoe width	mm	600	600	600	600	600	600	600	600	600	600
M. Min. ground clearance *	mm	475	475	475	475	475	475	475	475	475	475
N. Overall length	mm	10 605	10 500	10 540	10 605	10 500	10 540	10 605	10 535	10 535	14 565
O. Overall height of boom	mm	3 470	3 345	3 580	3 470	3 345	3 580	3 385	3 325	3 605	-

\* Without shoe grouser

' 2-piece boom

## DIMENSIONS

### Boom

Description	Unit	mono	mono	2-piece	Long-Reach
Boom	m	6.2 GP	6.2 HD	6.2	10.2
Length	mm	6 425	6 425	6 425	10 425
Height - Hose	mm	1 780	1 780	1 595	-
Height - Pipe	mm	1 665	1 665	1 550	1 580
Width	mm	765	765	770	765
Weight	kg	2 505	2 735	3 375	3 380

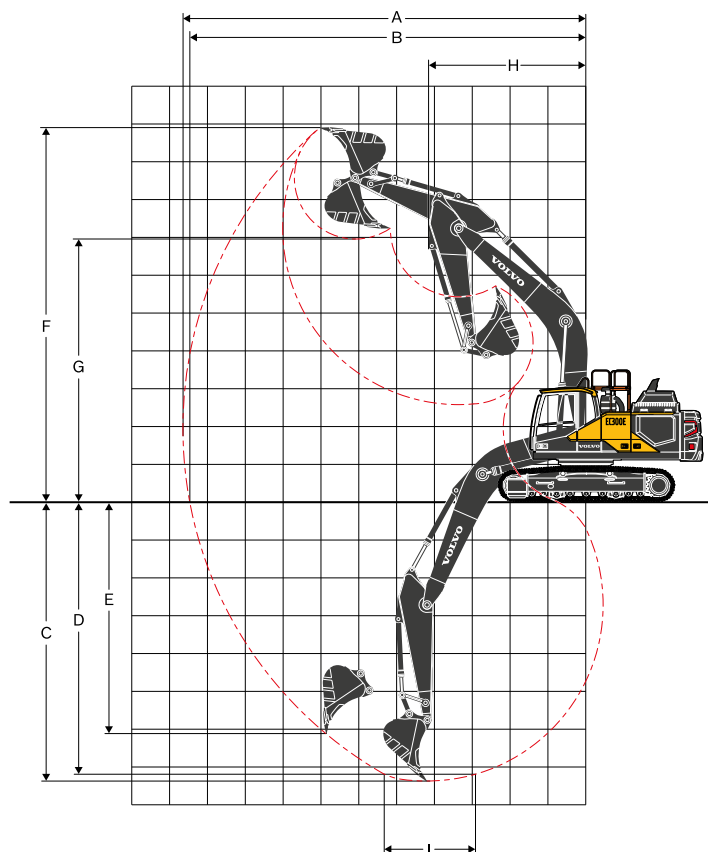
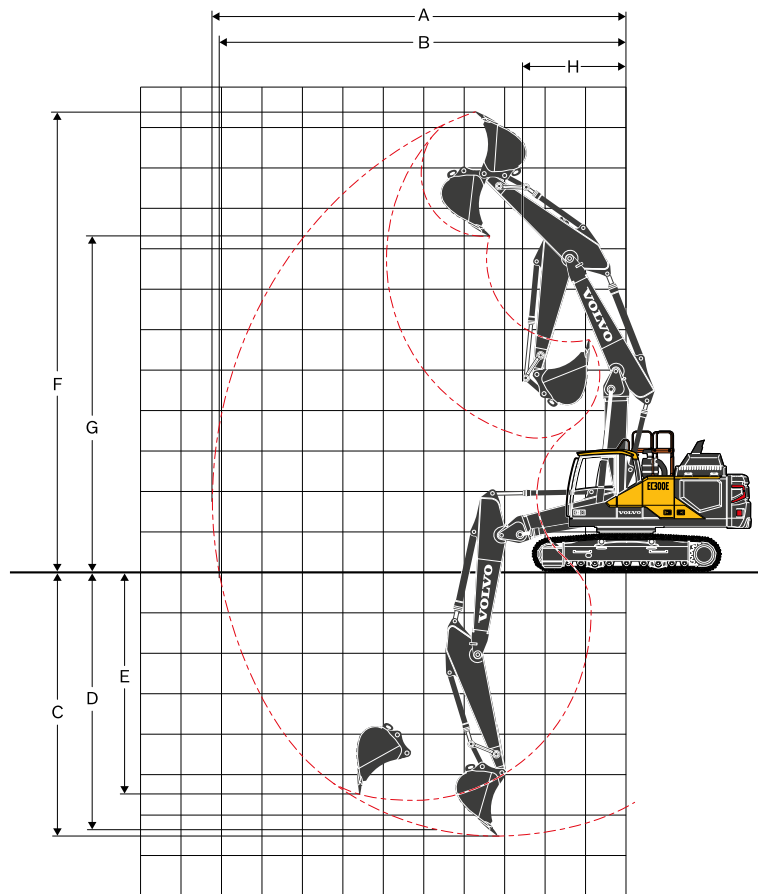
\* Includes cylinder, piping and pin, excludes boom cylinder pin

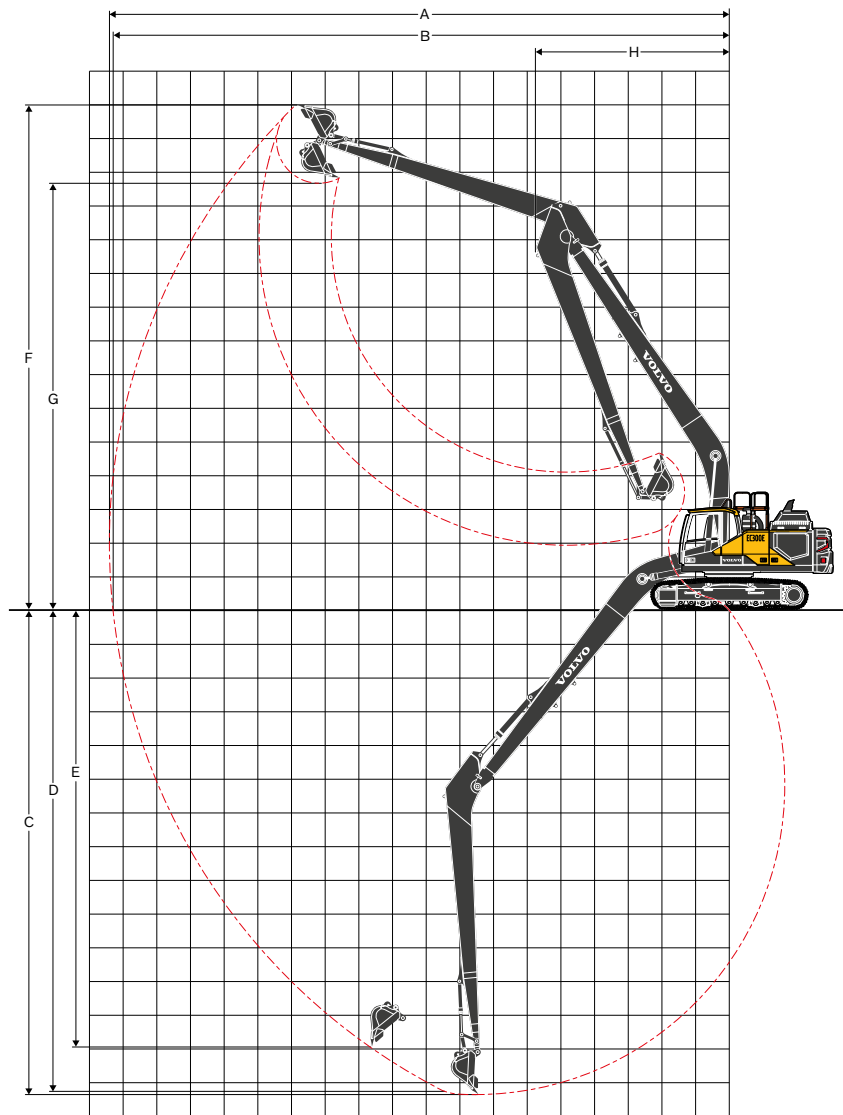
### Arm

Description	Unit	2.55 HD	3.05 GP	3.05 HD	3.7 GP	7.9 LR
Length	mm	3 720	4 145	4 145	4 800	9 055
Height	mm	1 005	1 010	1 010	1 005	1 095
Width	mm	560	560	560	560	435
Weight	kg	1 450	1 510	1 570	1 630	1 770

\* Includes cylinder, linkage and pin

# Specifications





### WORKING RANGES

Description	Unit	EC300EL / EC300ENL						EC300ELR
		6.2			6.2 2-piece			
Boom	m							
Arm	m	2.55	3.05	3.7	2.55	3.05	3.7	7.9
A. Max. digging reach	mm	10 180	10 710	11 310	10 250	10 780	11 390	18 590
B. Max. digging reach on ground	mm	9 970	10 520	11 130	10 040	10 580	11 210	18 480
C. Max. digging depth	mm	6 840	7 340	7 990	6 210	6 730	7 370	14 750
D. Max. digging depth (2.44 m level)	mm	6 600	7 150	7 830	6 100	6 630	7 280	14 650
E. Max. vertical wall digging depth	mm	5 320	6 080	6 680	5 040	5 630	6 240	13 630
F. Max. cutting height	mm	9 560	9 980	10 260	11 550	12 070	12 570	14 940
G. Max. dumping height	mm	6 680	7 040	7 330	8 360	8 850	9 360	12 600
H. Min. front swing radius	mm	4 220	4 180	4 240	2 750	2 580	2 770	6 190

### DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius		mm	1 624	1 624	1 624	1 624	1 624	1 624	1 248	
Breakout force	Normal	SAE J1179	kN	165	165	165	165	165	69	
			Power boost	kN	179	179	179	179	179	69
	Normal	ISO 6015	kN	190	190	190	190	190	78	
			Power boost	kN	207	207	207	207	207	78
Tearout force	Normal	SAE J1179	kN	158	133	116	158	133	116	51
			Power boost	kN	172	144	126	172	144	126
	Normal	ISO 6015	kN	163	136	118	163	136	118	52
			Power boost	kN	177	148	129	177	148	129
Rotation angle, bucket		°	179	179	179	179	179	179	178	

# Specifications

## 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
<b>EC300EL</b>							
		<b>6.2 m boom (GP), 3.05 m arm (GP), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>			<b>6.2 m boom (HD), 3.05 m arm (HD), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>		
Triple grouser	600	30 640	59.1	3 190	30 940	59.7	3 190
	600 (HD)	30 860	59.5	3 190	31 150	60.1	3 190
	700	31 230	51.6	3 290	31 520	52.1	3 290
	800	31 590	45.7	3 390	31 880	46.1	3 390
	900	31 950	41.1	3 490	32 240	41.5	3 490
Double grouser	700	31 420	52.0	3 290	31 710	52.4	3 290
		<b>6.2 m boom (2-piece), 3.05 m arm (GP), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>			<b>6.2 m boom (2-piece), 3.05 m arm (HD), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>		
Triple grouser	600	31 230	60.3	3 190	31 610	61.0	3 190
	600 (HD)	31 450	60.7	3 190	31 820	61.4	3 190
	700	31 820	52.6	3 290	32 190	53.2	3 290
	800	32 180	46.6	3 390	32 550	47.1	3 390
	900	32 540	41.9	3 490	32 910	42.3	3 490
Double grouser	700	32 010	52.9	3 290	32 380	53.5	3 290
<b>EC300ENL</b>							
		<b>6.2 m boom (GP), 3.05 m arm (GP), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>			<b>6.2 m boom (HD), 3.05 m arm (HD), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>		
Triple grouser	600	30 510	58.9	2 990	30 800	59.4	2 990
	600 (HD)	30 720	59.3	2 990	31 020	59.8	2 990
	700	31 090	51.4	3 090	31 390	51.9	3 090
	800	31 460	45.5	3 190	31 750	45.9	3 190
	900	31 820	40.9	3 290	32 110	41.3	3 290
Double grouser	700	31 290	51.7	3 090	31 580	52.2	3 090
		<b>6.2 m boom (2-piece), 3.05 m arm (GP), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>			<b>6.2 m boom (2-piece), 3.05 m arm (HD), 1 209 kg / 1.32 m<sup>3</sup> bucket, 6 200 kg counterweight</b>		
Triple grouser	600	31 100	60.0	2 990	31 470	60.7	2 990
	600 (HD)	31 310	60.4	2 990	31 690	61.1	2 990
	700	31 680	52.4	3 090	32 060	53.0	3 090
	800	32 040	46.4	3 190	32 420	46.9	3 190
	900	32 410	41.7	3 290	32 780	42.2	3 290
Double grouser	700	31 880	52.7	3 090	32 250	53.3	3 090
<b>EC300ELR</b>							
		<b>10.2 m boom (LR), 7.9 m arm (LR), 478 kg / 0.57 m<sup>3</sup> bucket, 6 900 kg counterweight</b>					
Triple grouser	600	31 770	61.3	3 190			
	600 (HD)	31 980	61.7	3 290			
	800	32 710	47.3	3 390			
	900	33 080	42.5	3 490			

**BUCKET SELECTION GUIDE**

Bucket type		Capacity	Cutting width	Weight	Teeth	EC300EL						EC300ENL					
						600 mm shoe, 6 200 kg counterweight						600 mm shoe, 6 200 kg counterweight					
						6.2 m GP Boom			6.2 m 2-piece Boom			6.2 m Boom			6.2 m 2-piece Boom		
						L	mm	kg	EA	2.55 m	3.05 m	3.7 m	2.55 m	3.05 m	3.7 m	2.55 m	3.05 m
Direct fit bucket	General purpose	550	600	883	3	C	C	C	C	C	C	C	C	C	C	C	C
		660	750	867	3	C	C	C	C	C	C	C	C	C	C	C	C
		770	900	996	4	C	C	C	C	C	C	C	C	C	C	C	C
		950	1090	1025	4	C	C	C	C	C	C	C	C	C	C	C	C
		1140	1240	1192	5	C	C	C	C	C	C	C	C	C	C	C	C
		1320	1390	1209	5	C	C	C	C	C	C	C	C	C	C	C	C
		1450	1490	1270	5	C	C	C	C	C	C	C	C	C	C	C	C
		1510	1540	1314	5	C	C	C	C	C	C	C	C	C	C	C	B
		1760	1740	1448	6	C	C	B	C	C	B	C	B	B	C	B	A
	1930	1840	1529	6	C	C	B	C	B	A	C	B	A	B	B	X	
	2060	1950	1590	6	C	B	A	C	B	A	B	A	X	B	A	X	
	Heavy duty	550	600	881	3	D	D	D	D	D	D	D	D	D	D	D	D
		660	750	920	3	D	D	D	D	D	D	D	D	D	D	D	D
		1140	1240	1214	5	D	D	D	D	D	D	D	D	D	D	D	D
		1270	1405	1336	5	D	D	D	D	D	D	D	D	D	D	D	D
		1320	1390	1301	5	D	D	D	D	D	D	D	D	D	D	D	D
		1510	1540	1387	5	D	D	D	D	D	C	D	D	B	D	D	B
		1690	1690	1485	5	D	D	B	D	D	B	D	C	B	D	B	A
1930		1840	1623	6	C	B	A	C	B	A	B	B	A	B	A	x	
Direct fit bucket (UQC interface)		General purpose	550	600	883	3	C	C	C	C	C	C	C	C	C	C	C
	660		750	867	3	C	C	C	C	C	C	C	C	C	C	C	
	770		900	996	4	C	C	C	C	C	C	C	C	C	C	C	
	950		1090	1025	4	C	C	C	C	C	C	C	C	C	C	C	
	1140		1240	1192	5	C	C	C	C	C	C	C	C	C	C	C	
	1320		1390	1209	5	C	C	C	C	C	C	C	C	B	C	C	B
	1450		1490	1270	5	C	C	C	C	C	B	C	C	B	C	B	A
	1510		1540	1314	5	C	C	B	C	C	B	C	B	A	C	B	A
	1760		1740	1448	6	C	B	A	C	B	A	B	A	x	B	A	x
	1930	1840	1529	6	B	B	A	B	A	x	B	A	x	A	x	x	
	2060	1950	1590	6	B	A	x	B	A	x	A	X	x	A	x	x	
	Heavy duty	550	600	881	3	D	D	D	D	D	D	D	D	D	D	D	D
		660	750	920	3	D	D	D	D	D	D	D	D	D	D	D	D
		1140	1240	1214	5	D	D	D	D	D	D	D	D	C	D	D	C
		1320	1390	1301	5	D	D	C	D	D	C	D	D	B	D	C	B
		1510	1540	1387	5	D	D	B	D	C	B	C	B	A	C	B	A
		1690	1690	1485	5	D	B	A	C	B	A	B	A	x	B	A	x
		1930	1840	1623	6	B	A	x	B	A	x	A	x	x	A	x	x

For long reach boom and arm configuration, Volvo recommends to use 0.57 m<sup>3</sup> (0.75 yd<sup>3</sup>) bucket  
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/m <sup>3</sup>	Coal, Caliche, Shale
B	1 400~1 600 kg/m <sup>3</sup>	Wet earth and clay, Limestone, Sandstone
C	1 700~1 800 kg/m <sup>3</sup>	Granite, Wet sand, Well blasted rock
D	> 1 900 kg/m <sup>3</sup>	Wet mud, Iron ore
X	Not recommended	



### LIFTING CAPACITY EC300EL

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		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		m
		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	
Boom : 6.2 m 2 pcs Arm : 2.55 m Shoe : 600 mm CWT : 6 200 kg	9.0 m kg					*11 710	*11 710							*10 640	*10 640	4.9
	7.5 m kg					*11 290	*11 290	*10 050	8 810					*9 320	7 450	6.6
	6.0 m kg			*12 170	*12 170	*12 290	*12 290	*10 310	8 660	*9 210	6 000			*8 900	5 820	7.6
	4.5 m kg					*14 310	12 900	*11 120	8 300	9 170	5 880			7 840	5 030	8.2
	3.0 m kg					*16 440	11 850	*12 040	7 860	8 940	5 680			7 280	4 640	8.6
	1.5 m kg							12 260	7 490	8 730	5 490			7 120	4 510	8.6
	0 m kg					*16 280	10 980	12 010	7 280	8 600	5 370			7 350	4 630	8.4
	-1.5 m kg					*14 390	11 010	*11 290	7 230	*8 570	5 360			*7 840	5 060	7.8
	-3.0 m kg					*11 380	11 200	*8 970	7 350					*6 980	6 050	7.0
Boom : 6.2 m 2 pcs Arm : 3.05 m Shoe : 600 mm CWT : 6 200 kg	9.0 m kg					*9 760	*9 760							*7 380	*7 380	5.8
	7.5 m kg					*9 190	*9 190	*9 400	9 010					*6 550	6 420	7.3
	6.0 m kg					*9 740	*9 740	*9 760	8 830	*8 750	6 120			*6 230	5 200	8.2
	4.5 m kg					*13 400	13 190	*10 620	8 430	*9 060	5 950			*6 180	4 560	8.8
	3.0 m kg					*15 680	12 070	*11 640	7 940	8 990	5 720	6 760	4 310	*6 340	4 240	9.1
	1.5 m kg					*16 940	11 220	12 280	7 500	8 740	5 490	6 660	4 210	6 510	4 120	9.1
	0 m kg					*16 640	10 860	11 960	7 220	8 560	5 330			6 680	4 210	8.9
	-1.5 m kg			*11 010	*11 010	*15 150	10 800	*11 650	7 120	8 490	5 270			7 230	4 540	8.4
	-3.0 m kg					*12 550	10 950	*9 820	7 190	*6 990	5 370			*6 700	5 280	7.6
Boom : 6.2 m 2 pcs Arm : 3.7 m Shoe : 600 mm CWT : 6 200 kg	10.5 m kg					*7 390	*7 390							*6 910	*6 910	4.7
	9.0 m kg							*7 200	*7 200					*5 520	*5 520	6.8
	7.5 m kg							*7 460	*7 460	*6 650	6 220			*4 990	*4 990	8.0
	6.0 m kg					*7 060	*7 060	*7 820	*7 820	*7 700	6 170			*4 770	4 540	8.9
	4.5 m kg			*10 040	*10 040	*9 870	*9 870	*9 580	8 550	*8 520	5 990	*6 700	4 400	*4 730	4 030	9.4
	3.0 m kg					*14 670	12 500	*11 050	8 070	9 030	5 740	6 750	4 290	*4 850	3 770	9.7
	1.5 m kg					*16 560	11 560	*12 030	7 610	8 760	5 500	6 610	4 170	*5 110	3 670	9.7
	0 m kg			*5 950	*5 950	*16 980	11 040	12 040	7 280	8 540	5 300	6 510	4 070	*5 570	3 740	9.5
	-1.5 m kg			*10 200	*10 200	*16 080	10 860	11 840	7 110	8 420	5 200	6 470	4 040	*6 330	3 990	9.1
	-3.0 m kg			*15 880	*15 880	*14 010	10 900	*10 720	7 100	*8 110	5 210			*6 470	4 530	8.3
-4.5 m kg					*10 510	*10 510	*7 980	7 260							7.2	

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 EC300ELR**

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	0 m		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m	
		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
Boom: 10.2 m LR Arm: 7.85 m LR Shoe: 800 mm CWT: 6 900 kg	3.0 m kg					*4 200	*4 200					*5 290	*5 290	*4 500	*4 500
	1.5 m kg							*5 640	*5 640	*7 990	7 430	*6 160	5 510	*5 090	4 260
	0 m kg					*1 810	*1 810	*3 990	*3 990	*9 090	6 640	*6 920	4 990	*5 620	3 910
	-1.5 m kg			*1 780	*1 780	*2 370	*2 370	*3 940	*3 940	*7 280	6 140	*7 500	4 610	*6 060	3 630
	-3.0 m kg	*2 440	*2 440	*2 460	*2 460	*3 030	*3 030	*4 360	*4 360	*7 040	5 870	*7 680	4 360	5 950	3 430
	-4.5 m kg	*2 990	*2 990	*3 150	*3 150	*3 760	*3 760	*5 010	*5 010	*7 440	5 750	7 530	4 230	5 820	3 310
	-6.0 m kg	*3 600	*3 600	*3 880	*3 880	*4 550	*4 550	*5 840	*5 840	*8 240	5 750	7 480	4 190	5 760	3 250
	-7.5 m kg	*4 270	*4 270	*4 660	*4 660	*5 440	*5 440	*6 840	*6 840	*9 410	5 840	7 520	4 220	5 770	3 270
	-9.0 m kg	*4 990	*4 990	*5 510	*5 510	*6 440	*6 440	*8 050	*8 050	*9 240	6 000	*7 450	4 330	5 850	3 340
	-10.5 m kg			*6 450	*6 450	*7 600	*7 600	*9 580	*9 580	*8 310	6 250	*6 750	4 510	*5 580	3 490
	-12.0 m kg					*8 980	*8 980	*8 680	*8 680	*6 900	6 620	*5 620	4 790	*4 560	3 740
	-13.5 m kg									*4 690	*4 690				
		Lifting point	10.5 m		12.0 m		13.5 m		15.0 m		16.5 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: 10.2 m LR Arm: 7.85 m LR Shoe: 800 mm CWT: 6 900 kg	13.5 m kg											*1 330	*1 330	12.9	
	12.0 m kg					*1 870	*1 870					*1 260	*1 260	14.1	
	10.5 m kg					*2 460	*2 460	*1 330	*1 330			*1 210	*1 210	15.1	
	9.0 m kg					*2 700	*2 700	*2 060	*2 060			*1 190	*1 190	15.9	
	7.5 m kg					*2 800	2 740	*2 530	2 170			*1 180	*1 180	16.4	
	6.0 m kg			*3 060	*3 060	*2 950	2 630	*2 870	2 110	*1 690	1 680	*1 190	*1 190	16.9	
	4.5 m kg	*3 570	*3 570	*3 320	3 120	*3 130	2 510	*2 990	2 020	*2 080	1 630	*1 220	*1 220	17.2	
	3.0 m kg	*3 980	3 660	*3 610	2 930	*3 340	2 370	*3 140	1 930	*2 360	1 570	*1 260	*1 260	17.3	
	1.5 m kg	*4 390	3 390	*3 900	2 740	*3 550	2 240	3 120	1 830	*2 530	1 510	*1 320	*1 320	17.3	
	0 m kg	*4 770	3 140	*4 180	2 560	3 570	2 110	3 020	1 750	*2 560	1 450	*1 390	1 330	17.2	
	-1.5 m kg	4 970	2 930	4 110	2 410	3 450	2 000	2 940	1 670	*2 370	1 400	*1 500	1 330	17.0	
	-3.0 m kg	4 800	2 780	3 980	2 290	3 370	1 910	2 880	1 610	*1 810	1 380	*1 630	1 370	16.6	
	-4.5 m kg	4 700	2 680	3 900	2 210	3 310	1 860	2 850	1 580			*1 820	1 430	16.0	
	-6.0 m kg	4 650	2 630	3 870	2 180	3 290	1 840	2 860	1 590			*2 070	1 540	15.3	
	-7.5 m kg	4 650	2 640	3 880	2 190	3 320	1 870					*2 440	1 720	14.5	
	-9.0 m kg	4 720	2 700	3 950	2 260							*3 020	1 990	13.3	
-10.5 m kg	*4 640	2 840									*3 800	2 430	11.9		
-12.0 m kg											*3 840	3 250	10.1		
-13.5 m kg											*3 650	*3 650	7.5		

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 EU Stage V requirements

Air filter with indicator

Air intake heater

Cyclone precleaner

Electric engine shutoff

Fuel filter and water separator

Fuel filler pump: 50 l/min, with automatic shutoff

Alternator, 80 A

### Electric / Electronic control system

Advanced mode control system

Selfdiagnostic 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

Highcapacity LED lights:

- Frame-mounted 2

- Boom-mounted 1

Batteries, 2 x 12 V / 170 A

Start motor, 24 V / 5.5 kW

### Frame

Access way with handrail

Tool storage area

Punched metal antislip plates

Counterweight:

6 200 kg

6 900 kg Long Reach

### Undercarriage

Undercover (heavyduty)

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

Hose rupture valve: boom & arm

Overload warning device

Automatic sensing hydraulic system

Summation system

Boom priority

Arm priority

Swing priority

ECO mode fuel saving technology

Boom, arm and bucket regeneration valves

Swing antirebound valves

Boom and arm holding valves

Multistage filtering system

Cylinder cushioning

Cylinder contamination seals

Auxiliary hydraulic valve

Automatic twospeed travel motors

Hydraulic oil, longlife oil 46

## STANDARD EQUIPMENT

### Cab and interior

ROPS (ISO121172) certified cab

Silicon oil and rubber mounts with spring

Travel pedals and hand levers

Adjustable operator seat and joystick control console

Proportional joysticks with 3 switches

Heater & airconditioner, automatic

Flexible antenna

Radio with MP3 & USB Jack with bluetooth

Hydraulic safety lock lever

Cab, allweather sound suppressed, includes:

Cup holders

Door locks

Tinted glass

Floor mat

Horn

Large storage area

Pullup 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

Side view camera

Master key

### Track shoes

600 mm with triple grousers

800 mm with triple grousers Long Reach

### Digging equipment

Boom: 6.2 m monoblock

Arm: 3.05 m

Boom: 10.2 m monoblock, Long Reach

Arm: 7.9 m, Long Reach

Manual centralized lubrication

## 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

Delayed engine shutdown

### Electric

Extra work lights(Halogen or LED):

Cab-mounted 3

Boom-mounted 1

Counterweight-mounted 1

Green light beacon

Travel alarm

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

700/800/900 mm with triple grousers

600 mm HD with triple grousers

600/700 mm with double grousers

High walker undercarriage

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**OPTIONAL EQUIPMENT**

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**Hydraulic system**

- CDC, Comfort Driving Control
- Boom float function with HRV
- Boom float function without HRV
- Attachment management system (up to 32 programmable memories)
  - Variable flow and pressure pre-setting
- Hammer & shear, 1 and 2 pump flow
- Additional return filter
- Hydraulic piping:
  - Slope & rotator
  - Grapple
  - Oil leak (drain) line
- Quick coupler piping
- Volvo hydraulic quick coupler S2
- Volvo hydraulic quick coupler U30
- Volvo hydraulic quick coupler S70
- Volvo hydraulic quick coupler SQ70 55
- Volvo hydraulic quick coupler SQ70
- Hydraulic oil, biodegradable 46
- Hydraulic oil, longlife oil 32
- Hydraulic oil, longlife oil 68
- Fuel tank-fast fuel fill prep
- Straight travel pedal

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**OPTIONAL EQUIPMENT**

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**Cab and interior**

- High visibility cabin
- Fabric seat with heater
- Fabric seat with heater and air suspension
- Deluxe seat
- High-strength one piece front windshield (P5A)
- Opening top hatch
- Falling object guard, FOG (fixed type or hinge type)
- Frame-mounted
- Cab-mounted
- Cab-mounted falling object protective structure (FOPS)
- Volvo smart view
- Smoker kit (ashtray and lighter)
- Safety net for front window
- Lower wiper with intermittent control
- Anti-vandalism kit
- Specific key
- Cleaning air gun

**Digging equipment**

- Boom: 6,2 m 2 piece boom
- Boom: 10.2 m monoblock, long reach
- Arm: 2.55 m HD, 3.05 m HD, 3.7 m
- Arm: 7.9 m, long reach
- Linkage with lifting eye

**Machine controls**

- Dig Assist
- Volvo Active Control (Semi-autonomous)
- Please refer to separate Brochure for more details

**Service**

- Tool kit, daily maintenance
- Tool kit, full scale

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**SELECTION OF VOLVO OPTIONAL EQUIPMENT**

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**Two-piece boom****Swing out FOG****Demolition package****TiltRotator****Volvo Smart View****Long Reach boom arm with Dig Assist**

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.



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