

Volvo Construction Equipment  
Building Tomorrow



# EC200D

Volvo Crawler Excavators 19.8-20.5 t 167 hp



# Lift and load for less

Do more and earn more with the EC200D. The Volvo crawler excavator offers the perfect combination of power and reliability to achieve outstanding fuel efficiency and long-lasting performance. With ECO Mode, simplified service and newly designed general-purpose boom and arm, the result is maximum performance and minimum total cost of ownership.

## E for economy

Achieve outstanding fuel efficiency and boost profitability with Volvo's unique ECO Mode. Volvo's unique ECO mode features sophisticated electronic pump control technology which improves fuel efficiency. ECO mode can be used in the G, H and P work modes.



## Service made simple

The EC200D is built to ensure servicing is safe, quick and easy, featuring anti-slip plates, grouped filters, ground-level service access and centralized lubrication points. Long service intervals enhance machine availability and increase uptime for maximum productivity.



## Proven reliability

Benefit from a reliable performance, shift after shift with the EC200D, providing all the built-in quality and reliability you'd expect from Volvo. Built with durable components, the D-Series excavator delivers long-lasting performance for excellent return on investment and high resale value.



## Boom and arm you can rely on

For optimum machine weight and minimum total cost of ownership, the newly designed boom and arm is the perfect choice for general-purpose applications.





# DO MORE WITH LESS FUEL

Reduce fuel consumption and increase productivity with the EC200D, equipped with advanced features, such as ECO Mode to deliver lower fuel consumption when compared to similar excavators. The highly efficient and powerful D5 engine works in harmony with the optimized hydraulic system and the auto-idle function, which also contributes to reduced fuel consumption and optimum profitability.



# THE RIGHT MACHINE FOR THE JOB

The EC200D is the perfect partner for general-purpose applications – from road construction and building projects to agriculture, landscaping and utility work. Delivering optimum swing speed, excellent combined operation, powerful digging forces and fast cycle times – making it the most cost effective solution.

# Made to measure

High on performance, the Volvo EC200D offers the most cost effective solution for general-purpose applications. Thanks to the winning combination of the fuel-efficient Volvo D5 engine and advanced hydraulic system, plus the comfortable cab and improved controllability, you can count on the EC200D to deliver a smooth and efficient operation.

## Powered by Volvo

Experience unparalleled power and productivity with the robust D5 engine from Volvo. Working together with the machine's proven hydraulics, the Tier 3 Volvo engine delivers high torque at low rpm for the ultimate combination of performance and improved fuel efficiency – making it the ideal machine for general-purpose applications.



## Comfortable cab

Operate comfortably in the Volvo cab, packed with advanced features designed to maximize operator productivity and minimize fatigue. Boasting all-around visibility, ample space, adjustable seat and ergonomic controls, it's no wonder the Volvo cab is an industry-leader. For greater machine control and efficiency, the cab features a new I-ECU monitor that displays all necessary information for a smooth operation.



## Take control

Dig, swing, load and lift with increased controllability. The EC200D features increased hydraulic flow for responsive, accurate control in grading and combined operations. Benefit from smoother and easier movement when traveling and lifting simultaneously, as well as better grading quality from the harmonized boom and arm movement.



## The right mode for the job

Achieve optimum fuel efficiency and machine performance with Volvo's unique, integrated work mode system. Choose the best mode to suit the task at hand, selecting from I (Idle), F (Fine), G (General), H (Heavy) and P (Power max) mode. Select the correct mode according to your working conditions for added versatility and increased productivity.



# Purpose-built package

## Boom and arm you can rely on

For optimum machine weight and minimum total cost of ownership, the new boom and arm is ideal for general-purpose applications.

## Take control

Increased hydraulic flow ensures responsive, accurate control in grading and combined operations.

## Proven reliability

Volvo conducts rigorous testing in the development stages resulting in a reliable machine that won't let you down.

## Volvo Service Agreements

Volvo Service Agreements offer preventive maintenance, total repairs and a number of uptime services.

## E for economy

Volvo's intelligent ECO mode increases fuel efficiency.



## THE RIGHT MACHINE FOR THE JOB

The EC200D delivers optimum swing speed, excellent combined operation, powerful digging forces and fast cycle times.

### Powered by Volvo

A robust Volvo engine delivers high torque at low rpm for the ultimate combination of performance and fuel efficiency.

### Comfortable cab

A spacious, comfortable operator environment offers enhanced all-around visibility and a new I-ECU monitor.

### DO MORE WITH LESS FUEL

The powerful engine works in harmony with optimized hydraulics and auto-idle function for lower fuel consumption.

### Service made simple

Ground-level service access, centralized lubrication points and anti-slip plates make services quick and easy.



### COMPLETE SOLUTIONS

Volvo provides the right solutions throughout the entire life cycle of your machine to lower total cost of ownership.

### The right mode for the job

Choose the best mode to suit the task at hand, selecting from I (Idle), F (Fine), G (General), H (Heavy) and P (Power max) mode.



# COMPLETE SOLUTIONS

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.

# Adding value to your business

Optimize performance, productivity and reliability with a wide range of aftermarket services and customer solutions, tailor-made to your business and operations.

Protect your investment with a long-term partnership and benefit from an array of Genuine Volvo Parts, delivered by passionate people.

## What you need, when you need it

Retain high performance and peace of mind with Genuine Volvo Parts, because every component is part of something bigger. Maintain productivity and machine uptime with our range of readily available, proven parts – all backed by Volvo warranty. Only by using Genuine Volvo Parts, can you protect your investment, extend machine lifecycle and guarantee long-lasting performance.



## Dealer at your doorstep

With our extensive infrastructure of technicians, workshops and dealers, Volvo is here to fully support you using local knowledge and global experience. Whatever you do, wherever you go, your Volvo dealer is ready to help increase your uptime by attending to your service needs and offer expert support. Contact your local Volvo dealer to find the right solution for you.



## Volvo Service Agreements

Choose from our range of Volvo Service Agreements, offering preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Volvo Service Agreement, you are in control of your service costs.



# Volvo EC200D in detail

## Engine

The engine, which provide excellent performance, is equipped with four cylinder, vertical, electronic-controlled high pressure fuel injectors, internal EGR, 4.7 liter in-line waste gate turbo charger, air-to-air intercooler and water cooled diesel engine type.

Engine	Volvo	D5E
Max power at	r/min	2 000
Net, ISO 9249/SAE J1349	kW	115
	hp	156
Gross, ISO 14396/SAE J1995	kW	123
	hp	167
Max torque	Nm	670
at engine speed	r/min	1 600
No. of cylinders		4
Displacement	l	4.7
Bore	mm	108
Stroke	mm	130

## 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	100
Alternator	V/A	28 / 80
Start motor	V - kW	24 - 5.5

## Swing system

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

Max. slew speed	r/min	13.1
Max. slew torque	kNm	69.2

## 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	174
Max. travel speed (low)	km/h	3.3
Max. travel speed (high)	km/h	5.5
Gradeability	°	35

## Undercarriage

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

Track shoes		2 x 46
Link pitch	mm	190
Shoe width, triple grouser	mm	600 / 800
Bottom rollers		2 x 7
Top rollers		2 x 2

## Hydraulic system

The hydraulic system and new MCV (main control valve) use intelligent technology to control on-demand flow for highproductivity, high-digging capacity and excellent fuel efficiency. The summation system, boom, arm and swing priority along with boom, arm and bucket regeneration provides optimum performance.

The following important functions are included in the system:

- Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.
- Boom priority: Gives priority to the boom operation for faster raising when loading or performing deep excavations.
- Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.
- Swing priority: Gives priority to swing functions for faster simultaneous operations.
- Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.
- Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

### Main pump. Type: 2 x Variable displacement axial piston pumps

Maximum flow	l/min	2 x 200
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### Pilot pump. Type: Gear pump

Maximum flow	l/min	1 x 20
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### Relief value setting pressure

Implement	MPa	32.4
Travel circuit	MPa	32.4
Slew circuit	MPa	28.4
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	120 x 1 235
Arm		1
Bore x Stroke	ø x mm	130 x 1 540
Bucket		1
Bore x Stroke	ø x mm	115 x 1 065

## Service Refill

Fuel tank	l	330
Hydraulic system, total	l	280
Hydraulic tank	l	145
Engine oil	l	17
Engine coolant	l	15
Slew reduction unit	l	5.3
Travel reduction unit	l	2 x 3.5

## 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.

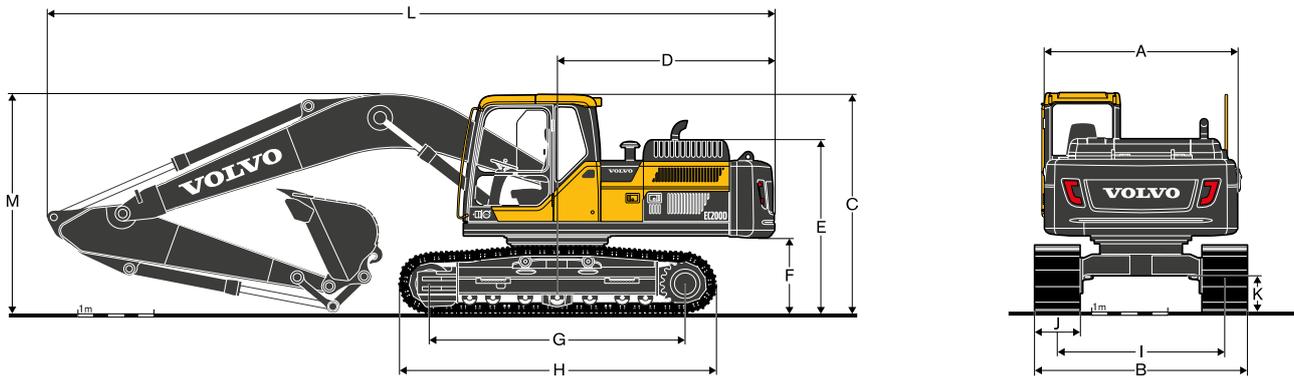
Integrated air-conditioning: The pressurized and filtered cab air is supplied and the air is distributed throughout the cab from 9 vents.

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

## Sound Level

Sound level in cab according to ISO 6396		
LpA (tropical)	dB(A)	71
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC)		
LwA (tropical)	dB(A)	106

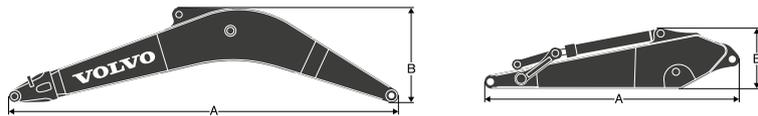
# Specifications



## MACHINE DIMENSIONS

Description	Unit	EC200D	
<b>Boom</b>	<b>m</b>	<b>5.7</b>	<b>5.7</b>
<b>Arm</b>	<b>m</b>	<b>2.9</b>	<b>2.5</b>
A Overall width of upper structure	mm	2 540	2 540
B Overall width	mm	2 800	2 800
C Overall height of cab	mm	2 910	2 910
D Tail swing radius	mm	2 860	2 860
E Overall height of engine hood	mm	2 310	2 310
F Counterweight clearance *	mm	1 005	1 005
G Tumbler length	mm	3 370	3 370
H Track length	mm	4 170	4 170
I Track gauge	mm	2 200	2 200
J Shoe width	mm	600	600
K Min. ground clearance *	mm	450	450
L Overall length	mm	9 560	9 615
M Overall height of boom	mm	2 920	3 060

\* Without shoe grouser

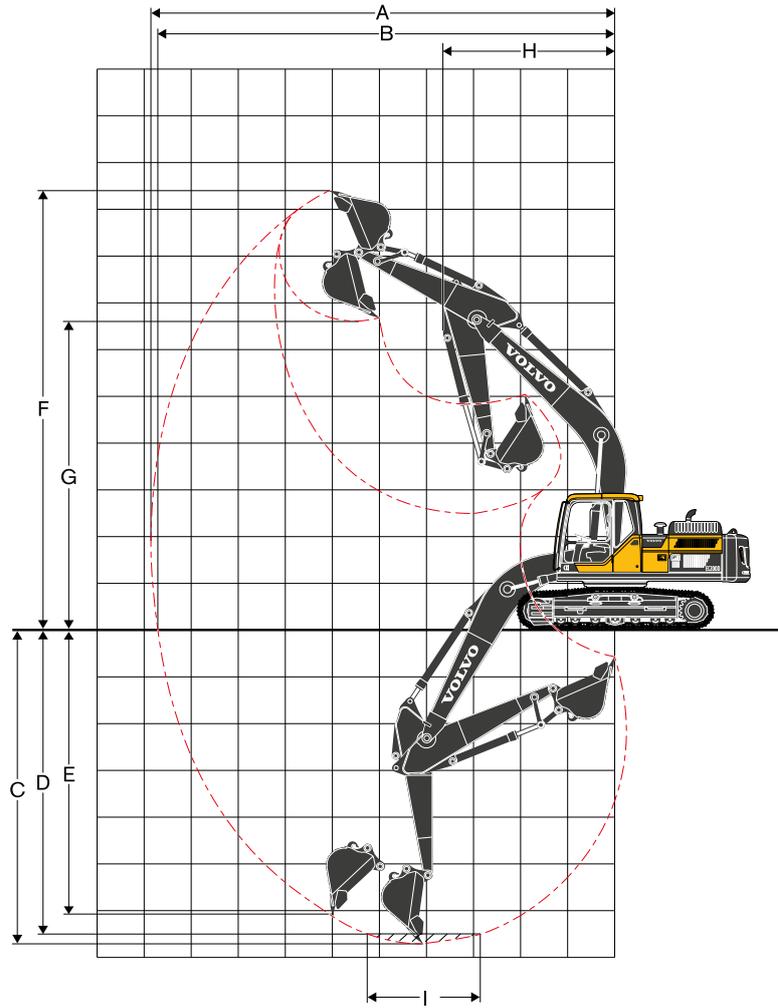


## BOOM AND ARM

Description	Unit	Mono boom		Arm	
		5.7	2.5	2.9	
A. Length	mm	5 910	3 525	3 910	
B. Height	mm	1 585	860	860	
Width	mm	670	440	440	
Weight	kg	1 851	1 006	1 017	

Boom: Includes cylinder, piping and pin, excludes boom cyl. Pin  
 Arm: Includes cylinder, linkage and pin

# Specifications



## WORKING RANGES WITH DIRECT FIT BUCKET

Description		Unit	EC200D		
<b>Boom</b>		<b>m</b>	<b>5.7</b>	<b>5.7</b>	<b>5.7</b>
<b>Arm</b>		<b>m</b>	<b>2.5</b>	<b>2.9</b>	<b>2.9</b>
<b>Bucket size</b>		<b>m<sup>3</sup></b>	<b>0.92</b>	<b>0.8</b>	<b>0.92</b>
A	Max. digging reach	mm	9 460	9 840	9 880
B	Max. digging reach on ground	mm	9 310	9 700	9 740
C	Max. digging depth	mm	6 280	6 680	6 720
D	Max. digging depth (l=2.44 m level)	mm	6 050	6 490	6 530
E	Max. vertical wall digging depth	mm	5 570	6 040	6 070
F	Max. cutting height	mm	9 130	9 370	9 410
G	Max. dumping height	mm	6 350	6 570	6 530
H	Min. front swing radius	mm	3 680	3 650	3 650

## DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius			mm	1 468	1 418	1 468
Breakout force (bucket)	Normal	SAE J1179	kN	113	116	113
	Power boost	SAE J1179	kN	-	-	-
	Normal	ISO 6015	kN	126	130	126
	Power boost	ISO 6015	kN	-	-	-
Tearout force (arm)	Normal	SAE J1179	kN	99	90	89
	Power boost	SAE J1179	kN	-	-	-
	Normal	ISO 6015	kN	101	93	92
	Power boost	ISO 6015	kN	-	-	-
Rotation angle, bucket			°	175	175	175

## BUCKET SELECTION GUIDE

Bucket type		Capacity	Cutting width	Weight	Teeth	EC200D, 5.7 m Boom, 2.9 m Arm, 4 100 kg counterweight		Lifting hook
		m <sup>3</sup>	mm	kg	EA	600 mm shoe	800 mm shoe	
Direct fit Buckets	General purpose	0.8	950	771	4	B	B	None
		0.92	1 050	819	4	B	B	None
		0.92	1 050	862	4	B	B	Hook

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	

### MACHINE WEIGHTS AND GROUND PRESSURE

#### EC200D, 5.7 m boom, 2.9 m arm, 0.8 m<sup>3</sup> / 624 kg bucket, 4 100 kg counterweight

Description	Shoe width	Operating weight	Ground pressure	Overall width
	mm	kg	kpa	mm
Triple grouser	600	19 760	44.2	2 800
	800	20 310	34.1	3 000

### LIFTING CAPACITY EC200D

Lifting capacity at the arm end without bucket.

For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level	1.5m		3.0m		4.5m		6.0m		7.5m		Max. Reach			
		Along UC	Across UC	Along UC	Across UC	m									
Boom : 5.7 m Arm : 2.5 m Shoe : 600 mm CWT : 4 100 kg	7.5 m kg												*4 520	*4 520	5.6
	6.0 m kg							*4 360	*4 360				*4 430	3 610	6.8
	4.5 m kg					*5 550	*5 550	*4 760	4 370	*4 480	3 040	*4 490	2 980	7.6	
	3.0 m kg					*7 130	6 290	*5 450	4 150	4 520	2 950	4 090	2 670	8.0	
	1.5 m kg					*8 540	5 830	6 140	3 920	4 400	2 850	3 940	2 550	8.1	
	0 m kg					*9 180	5 620	5 970	3 780	4 330	2 780	4 030	2 600	7.9	
	-1.5 m kg			*9 050	*9 050	*9 110	5 580	5 920	3 720				4 420	2 830	7.4
	-3.0 m kg			*11 740	10 890	*8 380	5 670	5 980	3 780				5 360	3 420	6.5
-4.5 m kg			*9 060	*9 060	*6 470	5 910						*5 610	5 090	5.0	
Boom : 5.7 m Arm : 2.5 m Shoe : 800 mm CWT : 4 100 kg	7.5 m kg												*4 520	*4 520	5.6
	6.0 m kg							*4 360	*4 360				*4 430	3 700	6.8
	4.5 m kg					*5 550	*5 550	*4 760	4 470	*4 480	3 110	*4 490	3 050	7.6	
	3.0 m kg					*7 130	6 430	*5 450	4 240	4 640	3 030	4 200	2 740	8.0	
	1.5 m kg					*8 540	5 970	*6 160	4 020	4 520	2 930	4 050	2 620	8.1	
	0 m kg					*9 180	5 760	6 130	3 870	4 440	2 850	4 140	2 670	7.9	
	-1.5 m kg			*9 050	*9 050	*9 110	5 720	6 080	3 820				4 540	2 910	7.4
	-3.0 m kg			*11 740	11 140	*8 380	5 810	6 140	3 880				5 500	3 510	6.5
-4.5 m kg			*9 060	*9 060	*6 470	6 060						*5 610	5 220	5.0	
Boom: 5.7 m Arm: 2.9 m Shoe: 600 mm CWT: 4 100 kg	7.5 m kg							*4 180	*4 180				*4 230	*4 230	6.1
	6.0 m kg							*4 070	*4 070				*4 030	3 320	7.3
	4.5 m kg							*4 520	4 470	*4 270	3 120	*3 970	2 800	8.0	
	3.0 m kg					*6 730	6 450	*5 250	4 240	*4 580	3 030	3 850	2 540	8.4	
	1.5 m kg					*8 270	5 970	*6 030	4 010	4 460	2 910	3 720	2 430	8.5	
	0 m kg			*4 510	*4 510	*9 140	5 700	6 030	3 840	4 370	2 830	3 790	2 460	8.3	
	-1.5 m kg	*5 210	*5 210	*8 680	*8 680	*9 280		5 950	3 770	4 330	2 800	4 110	2 660	7.8	
	-3.0 m kg	*9 580	*9 580	*12 570	10 850	*8 750	5 680	5 980	3 790				4 850	3 130	7.0
-4.5 m kg			*10 230	*10 230	*7 260	5 870						*5 490	4 320	5.6	
Boom: 5.7 m Arm: 2.9 m Shoe: 800 mm CWT: 4 100 kg	7.5 m kg							*4 180	*4 180				*4 230	*4 230	6.1
	6.0 m kg							*4 070	*4 070				*4 030	3 390	7.3
	4.5 m kg							*4 520	*4 520	*4 270	3 200	*3 970	2 870	8.0	
	3.0 m kg					*6 730	6 590	*5 250	4 330	*4 580	3 100	3 960	2 600	8.4	
	1.5 m kg					*8 270	6 110	*6 030	4 100	4 580	2 990	3 830	2 500	8.5	
	0 m kg			*4 510	*4 510	*9 140	5 840	6 190	3 940	4 480	2 900	3 900	2 530	8.3	
	-1.5 m kg	*5 210	*5 210	*8 680	*8 680	*9 280	5 770	6 110	3 860	4 450	2 870	4 220	2 730	7.8	
	-3.0 m kg	*9 580	*9 580	*12 570	11 110	*8 750	5 820	6 140	3 890				4 980	3 210	7.0
-4.5 m kg			*10 230	*10 230	*7 260	6 010						*5 490	4 430	5.6	

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. 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

Air filter with indicator

Air intake heater

Screen without pre-cleaner

Fuel filter and water separator

Alternator, 80A

### Electric / Electronic control system

Power max mode

Contronics

- Advanced mode control system

- Self-diagnostic system

Machine status indication

Engine speed sensing power control

Automatic idling system

Safety stop/start function

Adjustable LCD color monitor

Master electrical disconnect switch

Engine restart prevention circuit

High-capacity halogen lights:

- Frame-mounted

- Boom-mounted

Batteries, 2 x 12 V / 100 Ah

Start motor, 24 V / 5.5 kW

### Frame

Access way with handrail

Tool storage area

Punched metal anti-slip plates

Under cover

Full height counterweight 4 100 kg

4100kg counterweight

### Undercarriage

Hydraulic track adjusters

Greased and sealed track link

Track Guard

600mm with triple grousers

### Hydraulic system

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

Hydraulic oil, ISO VG 46

## STANDARD EQUIPMENT

### Cab and interior

Silicon oil and rubber mounts with spring

Adjustable operator seat with heater and joystick control console

Control joysticks with semi-long

Flexible antenna

Control lock out 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

- Windshield wiper with intermittent feature

Master key

### Track shoes

600 mm with triple grousers

800 mm with triple grousers

## OPTIONAL EQUIPMENT

### Engine

Water separator without heater

Extra water separator

Precleaner, cyclone

### Electric

Extra lights:

- Cab-mounted 3 (front 2, rear 1)

- Counterweight-mounted 1

Travel alarm

Anti-theft system

Rotating warning beacon (LED)

Caretrack, GSM/SAT

Caretrack subscription, GSM/SAT

Fuel filler pump, 35 lpm, A

Climate cont-A/C+heater, SC, A

Radio with MP3/AUX, Semi-Cab

SAT deactivation

### Frame

Rear view mirror on CWT

Side mirror on Tank

Track shoes

600/800 mm with triple grousers

GP Belly cover

### Hydraulic system

Hydraulic oil, ISO VG 46, 68

Hydraulic oil 46, 68

Longlife hyd oil mineral 32, 68

### Cab and interior

Fabric seat without heater

Fabric seat with heater and air suspension

Sun screens, front, roof, rear

Specific key

### Digging equipment

5.7m Boom

Arm: 2.9 m, 2.9m with strip, 2.5m

GP 0.80m<sup>3</sup> / 0.92m<sup>3</sup> bucket with / without hook

### Service

Tool kit, daily maintenance

Tool kit, full scale

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**SELECTION OF VOLVO OPTIONAL EQUIPMENT**

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**Air Conditioning**



**Extra Work Lights**



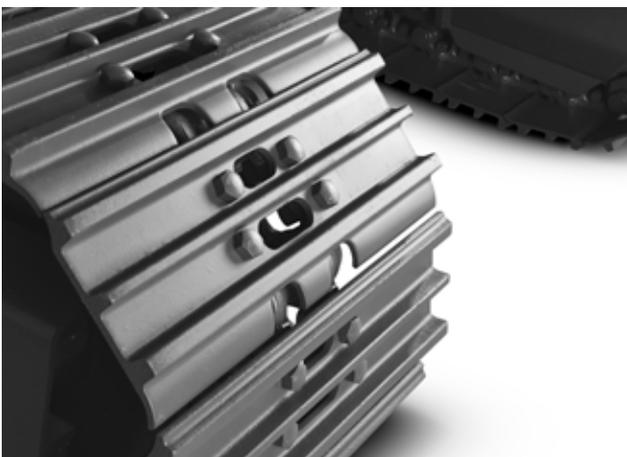
**LED Beacon**



**Pre-cleaner, Cyclone**



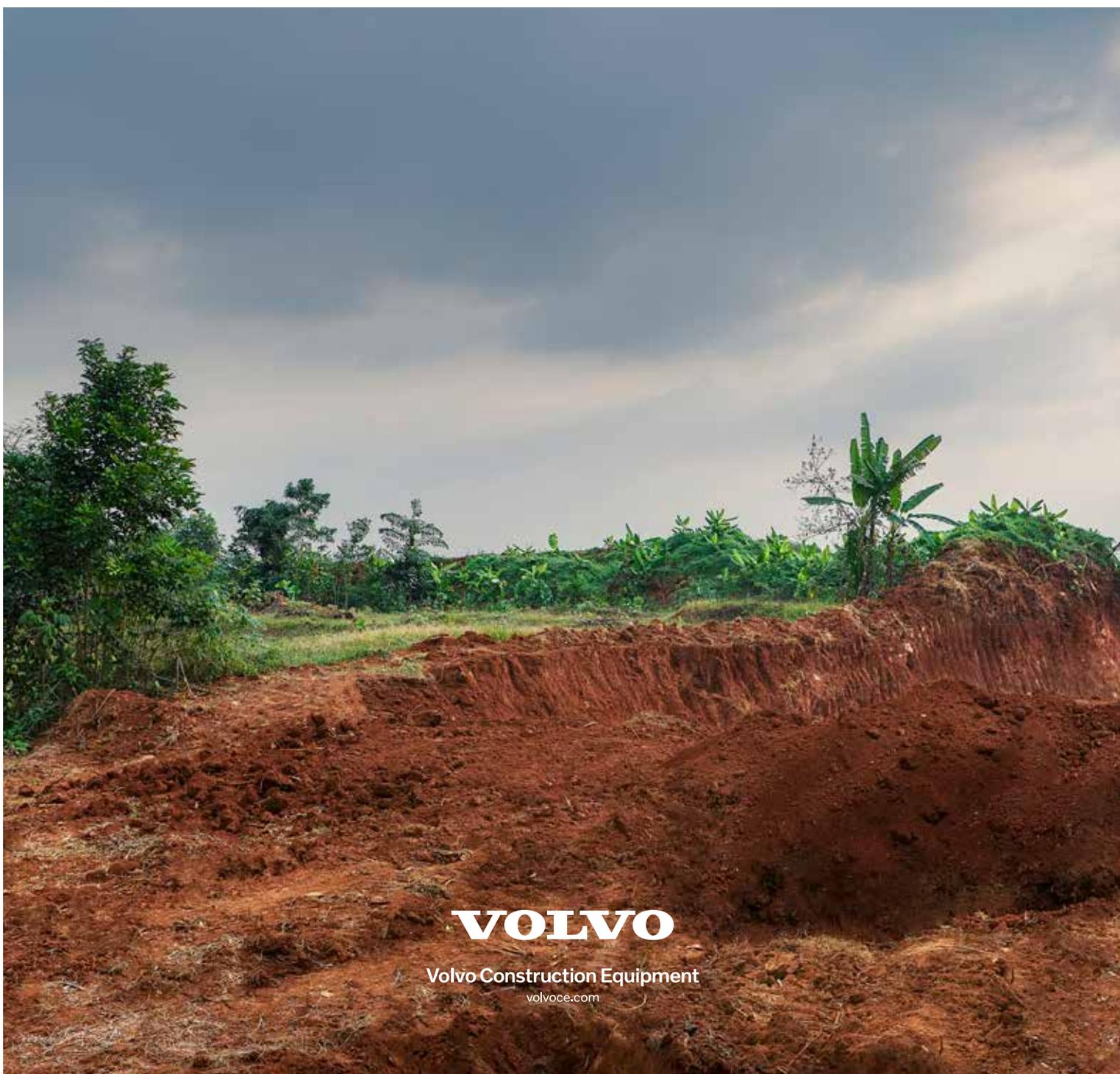
**Track Shoes**



**Additional Sun Screen**



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.



**VOLVO**

Volvo Construction Equipment

[volvoce.com](http://volvoce.com)