

V O L V O



Volvo Electric Compact Excavators 2.68 - 2.78 t

ECR25 ELECTRIC

Volvo Construction Equipment



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.

Small machines, big results

With decades of experience in the design and manufacture of compact excavators and wheel loaders, our range of compact machinery is designed with customer success in mind. Built from the same DNA as large Volvo machinery, our compact range sets the standard for efficiency, performance, and uptime – complemented by an extensive range of Volvo attachments for maximum versatility.

Building on our proud history, the Volvo Concept Lab continues to create cutting-edge ideas and innovative concepts – such as our award-winning electric compact machines – to ensure we offer our customers machines which deliver big results 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.

 <p>Fuel Efficiency Services</p>	 <p>Productivity Services</p>	 <p>Safety Services</p>
 <p>Financial Services</p>	 <p>Uptime Services</p>	 <p>Rental Services</p>
 <p>Volvo Attachments</p>	 <p>Genuine Volvo Parts</p>	 <p>New life Services</p>

BUILDING TOMORROW





ADD SILENCE

The Volvo ECR25 Electric includes our most precious feature yet - silence.

Expand your business, break new ground and experience unexpected power, all while enjoying no exhaust fumes, less dust, fewer vibrations and less noise.



A lot of job sites will not allow you to start working after a certain hour because of noise restrictions. In this electric machine you can work a night shift without disturbing the neighbours!

Anthony Coetzer,
Operator at Baltics Sands (USA)



We are using the ECR25 Electric in built-up areas and complex spaces, such as near hospitals and schools, where its emission-free and silent operation really comes into its own.

Bruno Meier,
CEO and Owner at B. MEIER ABBRUCH + TIEFBAU AG
(Switzerland)

Open up new opportunities

The Volvo ECR25 Electric is a true game changer. The first in a new range of electric compact excavators, it takes a proven concept – and then adds battery electric power. Because we know that being sustainable equals being successful – what's good for people, society and the world is ultimately good for your business.



At home in the city

The lower noise levels that the ECR25 Electric offers enable you to work anytime, anywhere – even at night in populated areas. This can lessen the disturbance inner city work can cause and reduce congestion at peak times, all the while increasing your efficiency. It also creates a more pleasant working environment for you and your colleagues with whom you can clearly communicate whilst operating.

Go where others can't

The ECR25 Electric features a zero-tail swing radius design making it perfect to confidently work in confined spaces. And thanks to zero emissions, the need for costly fumes extraction systems is eliminated in indoor jobs, such as basement groundworks and building demolition. This opens up new business opportunities which in turn helps optimize utilization.



The heart of operations

The ECR25 Electric takes the proven credentials of the industry's foremost cab – accessibility, visibility and class leading ergonomics – and then adds a substantial reduction in noise, vibration and heat, ensuring long lasting comfort and productivity. The lack of an exhaust is also noticeable, removing the associated fumes and minimizing the dust that they can generate.



As versatile as ever

Only with Volvo attachments do you get what you wanted when you bought a Volvo in the first place – maximum productivity and uptime. Volvo develops and offers a wide range of attachments, fully compatible with our electric machines, which brings you unmatched flexibility and versatility, making it easy for you to develop job opportunities and to get the job done with increased productivity.





MAKE THE MOST OF EVERY CHARGE

The ECR25 Electric can deliver up to 4 hours of work per charge depending on the environment and task at hand. For example, 3 hours of non-stop work could be expected when handling material, and 2 hours 20 minutes when doing precision digging.

To find out if an electric Volvo machine is the right fit for your activities, just talk to your dealer, who can help you calculate operating time and the optimum charging solution based on your operation.

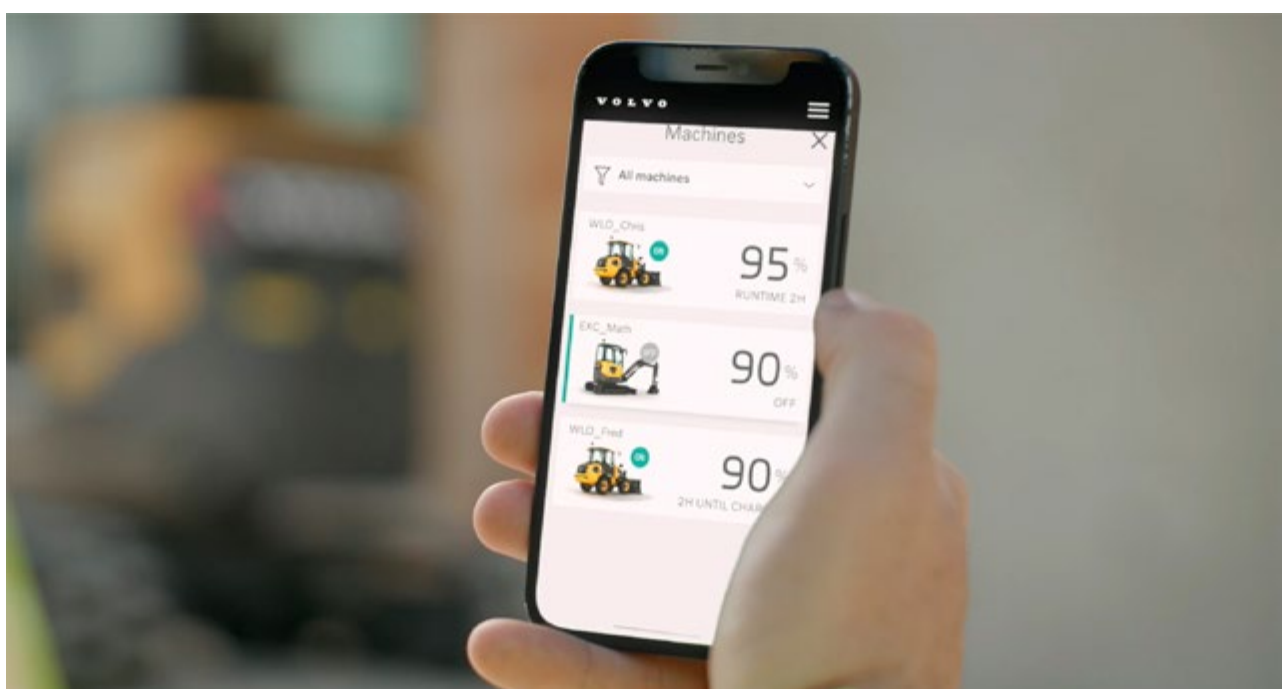


The machine offers all the performance of a diesel – the same power, same strength and it digs very well. I feel good in the cab and will happily stay in there from 6 in the morning until 8 in the evening. By taking advantage of recharging during a lunch break, we can operate 8-hours during the day and then work until night.

Massimo Olivieri,
Operator at Corsorzio Artigiano Scaligero (Italy)

Uptime you can count on

Enter the brave new world of electric machinery with complete confidence thanks to a range of solutions and services from Volvo. Count on the best battery technology, reduced servicing, fast-charging solutions and impressive warranties to give you complete peace of mind that your ECR25 Electric will deliver all the performance and uptime which your operation demands.



Electric Machines Management Application: your uptime partner

Stay ahead of charging requirements and ensure your Volvo electric machine is ready for action with our Electric Machines Management Application - a web application providing insight into your machine, including charging status, battery level and geographic location. Simply access the application on any internet-connected device to gain valuable information to help you manage the charging process more efficiently and maximize machine uptime.



◀ Here is how the Electric Machines Management Application works

The best battery technology

Lithium-ion batteries are the state-of-the-art technology in terms of electric power storage. Their energy density allows to carry the 20 kWh you need to work your hours, while having the ability to use DC charging for faster recharge process. They are also very fit for partial charging, which provides greater flexibility since you can use any break or other opportunity to recharge and gain some working time.

What's more, the battery is designed to deliver up to 2,000 full charge cycles, accounting for the full life expectancy of the machine. Finally, Volvo electric machines use standard automotive charging system for AC charging, proving to be filled with safety features and widely spread across for aftermarket charging solutions.

How to charge



Flexible charging solutions

The Volvo ECR25 Electric comes with an on-board charger which supplies a 3 kW power output to the batteries, allowing the machine to charge from 10% to 100% in as little as 5 hours. It comes with the necessary charging cable, plug and adapters to charge from a wall socket or wallbox.

When projects and applications demand faster charging, a range of optional fast off-board chargers are available for both indoor and outdoor use. These will charge the ECR25 Electric from 10 to 80% in up to 55 minutes.

Charging times ECR25 Electric	Grid side				Charging socket	Machine side
	Electric power supply					
	Type	Voltage	Current	Power outlet		
FAST CHARGING With off-board DC fast charger Max. charger output power/current : -9.6 kW/200 A -17.3 kW/360A	3P+N+E	400 V	32 A (=>360A)		 DIN	10-80% : 55 min
			16 A (=>200 A)	IEC60309 		10-80% : 1h 20 min
OVERNIGHT CHARGING With standard AC on-board charger Max. charger output power : -3 kW	1P+N+E	230 V	16 A	 IEC60309	 Type 2	5h
			13 A	 Type E Type F Type G		5h 30 min
			10 A			7h 15 min
			8 A			9h
			6 A			12h 15 min
Charging station and wall box				 Type 2 AC	 Type 2	5h

Reduced maintenance

Give your uptime a boost and reduce maintenance requirements thanks to the fully electrified machine, powered by a maintenance free motor. What's more, the electric motors stop when the machine is not working or moving, eliminating unnecessary wear.

5 years premium support

In addition to the first-class back-up and support from your Volvo dealer, Volvo CE electric machines come complete with 2-year free servicing and a 2-year full machine warranty. Furthermore, we have options to extend the coverage for some years. Please check with your local dealer for more information.



The innovative ECR25 Electric

State-of-the-art battery technology

- 2 to 4 hours of run time depending on application
- Anti-theft fixed battery
- 48V lithium-ion, maintenance-free battery
- Designed to deliver up to 2,000 full charge cycles
- 5-year battery warranty

Flexible charging solutions

- Standard Electric Vehicles (EV) charging protocol with safety features
- Multiple charging options | 80% in less than 1 hour
- Keep track of charging status, battery level and location with the Electric Machines Management Application

Get access to new markets

- Ability to work indoor or outside of standard hours
- Get access to low-carbon projects
- Removed need for fume extraction systems and operator time limits



New levels of comfort

- Large entrance, spacious and uncluttered heated cab
- Superior visibility, low vibration
- 5" color display with jog wheel navigation
- Simplified menu for better control over settings management
- Fingertip controls, with adjustable hydraulic flow



Reduced maintenance

- Maintenance-free electric motor, featuring auto shutoff to save wear
- Easy access to components
- 50-hours greasing intervals
- Patented multifunction hydraulic filter, protecting the hydraulic system
- Hoses protected inside the boom and arm

Proven performance

- Same performance as its diesel equivalent
- Zero-tail swing radius
- Front corner stays within tracks width
- Great combined movements performance
- Range of Volvo Attachments

Zero emission electric power

- No emission locally
- Sound level down
- Low electricity cost
- No power consumption when machine not working

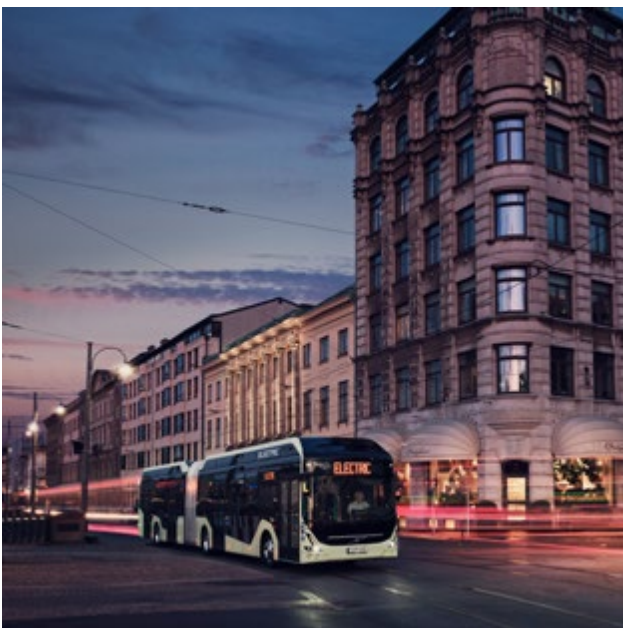
Explore
the machine
in our walkaround
video



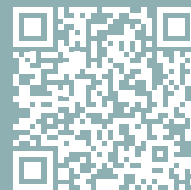


A commitment to electric

At Volvo Construction Equipment we are committed to building the world we want to live in. A world where progress is made in a sustainable, efficient and peaceful way. The ECR25 Electric is just one part of this and joins an ever-growing portfolio of Volvo electric machines, trucks and buses – helping to raise the bar for our industry when it comes to electric solutions.



**JOIN THE ELECTRIC
REVOLUTION**



▲
Reserve your Volvo electric
construction machine online!

Volvo ECR25 Electric in detail

Electrical System

Battery Type	Lithium-ion	
Battery Voltage	V	48
Battery capacity	kWh	20
	Ah	450
Indicative runtime (depending on application)	hours	up to 4
Auxiliary Battery Voltage	V	12
Auxiliary Battery capacity	Ah	70
Alternator	V/Ah	12/40

Electrical Motor

Motor type	Permanent magnet	
Motor power (peak)	kW	18
Motor power (continuous)	kW	14.8
Operating mode max. / Standard	r/min	2 050
Operating mode max. / Eco	r/min	1 800
Operating mode max. / Boost	r/min	2 400

Digging Performances

Standard bucket width (blade, W/O side cutter)	mm	500
Standard bucket mass	kg	59
Standard bucket rated capacity	l	74
Bucket rotation	°	205
Bucket breakout force (ISO)	daN	2 233
Short arm tearout force (ISO)	daN	1 776
With short arm	mm	1 050
Long arm tearout force (ISO)	daN	1 497
With long arm	mm	1 350

Swing System

Max, slew speed	r/min	9.4
Max, slew torque	daNm	485

Sound Level

Interior sound level according to ISO 6396		
LpA	dB	74
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009		
LWA	dB	84

Hydraulic System

Pump type	Variable displacement, load sensing	
Maximum system flow	l/min	58
Maximum flow for accessories	l/min	50
Maximum pressure for accessories	MPa	25
Maximum flow for 2nd accessory circuit	l/min	23
Maximum operating pressure	MPa	25

Undercarriage

Rubber track width	mm	300
Bottom/top rollers per side	3 / 1	
Track tension	by grease piston	
Blade (width x height)	mm	1 550 x 312

Travel System

Max, drawbar pull	daN	1 984
Max. travel speed low	km/h	2.4
Max. travel speed high	km/h	4.5
Gradeability	°	30

Service Refill

Hydraulic system, total	l	33
Hydraulic tank	l	23
Travel reduction unit	l	2 x 0.6

Weight and Ground Pressure

Operating weight according to ISO 6016	kg	2 675
Ground pressure (cab)	kPa	28.4
Transport weight	kg	2 600
With canopy		
With direct-fit bucket		
With rubber tracks	mm	300
With short arm	mm	1 050
With heated cab	+kg	90
With long arm	+kg	12
	mm	1 350

LIFTING CAPACITY ECR25 ELECTRIC

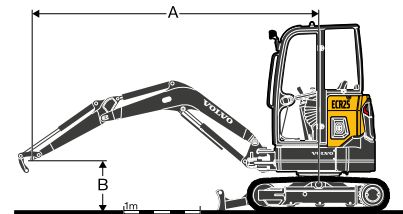
These capacities are given for a machine equipped with a cabin, 300 mm rubber tracks and without a bucket or quick coupler.

The below values are in compliance with ISO standard 10567. They do not exceed 75% of the tipping load or 87% of the hydraulic limit with the machine on firm level ground.

Loads marked with an asterisk (*) are limited by machine's hydraulic lifting capacity rather than tipping load.

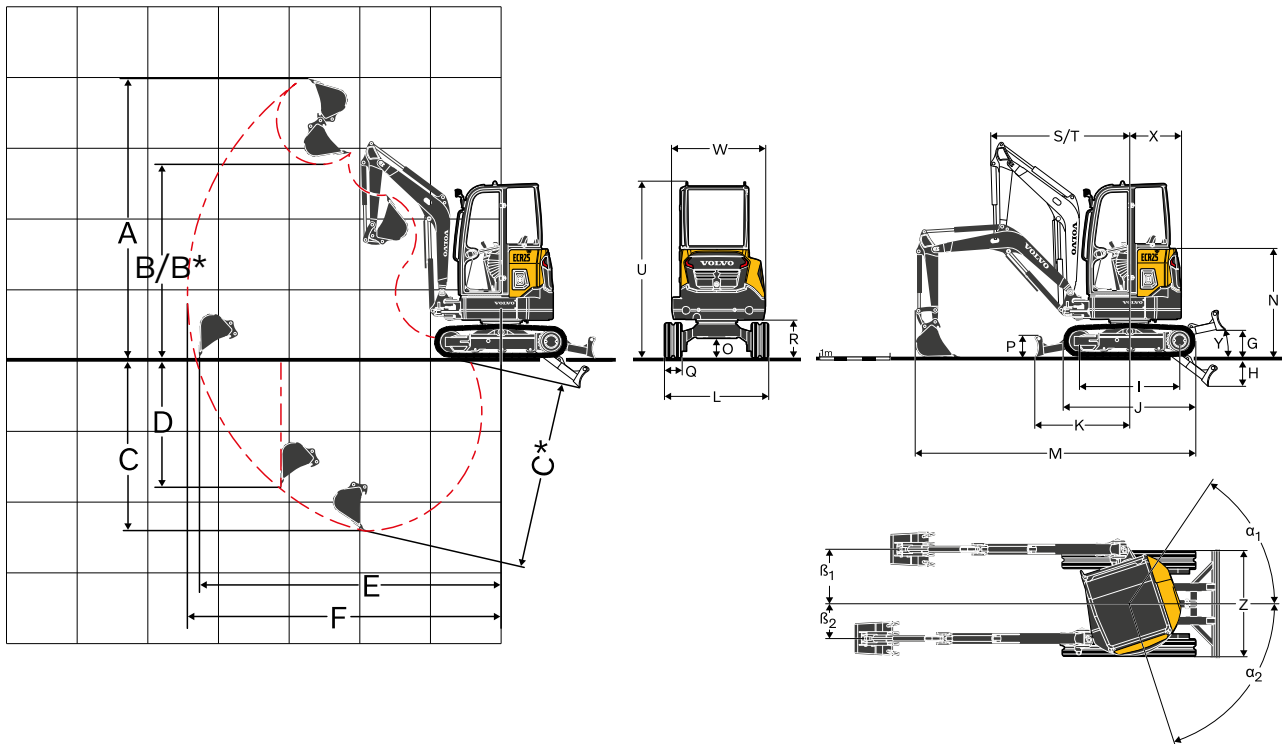
Caution: In accordance with standard EN 474-5, the machine must be equipped to carry out handling operations.

It is the operator's obligation to know and follow the applicable national and local safety regulations.



Along undercarriage	Across undercarriage	Lifting point height (B)	Lifting point radius (A)									Max. m
			2.0 m			3.0 m			Max. reach			
Arm: 1 050 mm Counterweight: Standard	3 m	kg	-	-	-	544	567*	519	530	567*	506	3.048
	2 m	kg	-	-	-	538	600*	513	394	592*	377	3.667
	1 m	kg	-	-	-	514	797*	490	358	685*	343	3.858
	0 m	kg	904	1 602*	848	496	934*	474	374	758*	358	3.706
	-1 m	kg	914	1 546*	858	501	850*	477	471	850*	449	3.144
Arm: 1 350 mm Counterweight: Standard	2 m	kg	-	-	-	500*	500*	500*	347	508*	332	3.971
	1 m	kg	942	1 334*	884	514	715*	489	319	577*	306	4.142
	0 m	kg	894	1 608*	838	492	897*	468	330	623*	316	4.002
	-1 m	kg	897	1 659*	840	488	902*	464	397	693*	379	3.502

Specifications



DIMENSIONS

Description		Unit	ECR25 Electric	
Arm		mm	1 050	1 350
A	Maximum cutting height	mm	4 010	4 183
B	Maximum dump height	mm	2 784	2 957
B*	Maximum bucket clearance	mm	2 897	3 070
C	Digging depth	mm	2 461	2 761
C*	Maximum digging depth	mm	2 672	2 965
D	Maximum vertical wall digging depth	mm	1 832	2 119
E	Maximum digging reach at ground level	mm	4 313	4 602
F	Maximum digging reach	mm	4 484	4 768
G	Highest position dozer blade	mm		401
H	Lowest position dozer blade	mm		422
I	Tumbler length	mm		1 440
J	Track length	mm		1 906
K	Dozer blade, maximum reach at ground level	mm		1 365
L	Overall width with 300 mm rubber tracks	mm		1 550
M	Overall length	mm	4 008	3 876
M	Transport length	mm	4 595	4 525
N	Overall height of engine hood	mm		1 570
O	Minimum ground clearance	mm		290
P	Dozer blade height	mm		312
Q	Shoe width (rubber)	mm		300
R	Ground clearance to superstructure	mm		554
S	Front slew radius	mm		2 002
T	Front slew radius with maximum offset	mm		1 555
U	Overall height cab	mm		2 535
W	Overall width of superstructure	mm		1 340
X	Tail slew radius	mm		750
Y	Angle of approach	°		34
Z	Dozer blade width	mm		1 550
alpha1	Maximum boom swing angle to the left	°		72
beta1	Maximum boom offset to the right	mm		784
alpha2	Maximum boom swing angle to the right	°		56
beta2	Maximum boom offset to the left	mm		496

Equipment

STANDARD EQUIPMENT

Drivetrain

- Axial piston hydraulic motors equipped with an epicyclic reduction gears
- Automatic two speed travel
- Bottom flanged rollers lubricated for life
- Grease tensioning wheel lubricated for life

Electric / Electronic control system

- Maintenance free 48V battery (3-rack) - fixed for anti-theft protection
- On-board charger with Type 2 socket
- Standard charger cable with 3 plugs (domestic - white, CEE 16A 1 phase - blue, and CEE 32A 3 phase - Red)
- Fast charger ready with weather protected socket
- Maintenance free 12V auxiliary battery
- High quality connectors
- Protected battery cut-off switch
- Auto-idling and auto-shutdown function on electric motor

Machine exterior

- Warning beacon, flashing LED
- Front cabin LED worklight
- Right and left rear-view mirror
- High visibility orange entrance foot step and handle
- White noise travel alarm

Swing System

- Radial piston hydraulic motor with direct engagement on the ball internal crown wheel (no reduction gears)
- Integrated shockless valve
- Automatic multi-disc spring applied hydraulic released slew brake
- Centralized and remote lubrication of crown wheel & ball bearing

Undercarriage

- 300 mm rubber tracks
- "X" shape, box welded fabricated frame with sloping side members
- 2 Tie-down points on the dozer blade
- 2 Tie-down points on the frame
- 2 lifting points on the frame
- Sturdy removeable protecting covers for track motors and slew system
- 400HB weld-on edge on dozer blade

Hydraulic system

- Plastic tank with drain plug
- Variable displacement, load-sensing piston pump
- Closed centre flow-sharing main control valve
- Cushioning on cylinders:
 - Boom up
- Large tiltable oil cooler
- Patented filtering and filling element
- Accessory flow adjustment
- Secondary relief valves for auxiliaries
- Hammer / shear valve
- Mineral hydraulic oil VG46

Machine control system

- Finger tip control for boom offset
- Finger tip control for auxiliary circuit
- Breaker toggle switch on right joystick
- Automatic locking device for pilot controls and travel levers when the left console is raised
- Electric motor starting safety device: the left console must be raised to operate the starter
- Pressure accumulator to lower the equipment on the ground when the motor is switched off
- High torque / automatic two speed change over switch on the dashboard
- High speed toggle switch on the dozer blade lever
- Large travel pedals

STANDARD EQUIPMENT

Cab

- Certified FOPS level 1 on top (Falling Object Protective Structure)
- Certified TOPS (Tip-Over Protective Structure)
- Certified ROPS (Roll-Over Protective Structure)
- Cushioned operator station
- Large door access
- Large and roomy uncluttered floor
- Gas-strut assisted front window opening
- Full opening front bay with in-cab storage for the front lower window
- Front windscreen wiper and washer nozzle
- Right hand side sliding window
- Flat toughened glass
- Heating systems with in-cab adjustment of temperature and air flow level
- Multiple adjustable air vents
- Filtered air inlet
- Toolbox with integrated storage for operator's manual and lockable door.
- Cab inside light
- High visibility 2" orange seatbelt
- Seatbelt with warning indicator
- In-cab 12V power socket
- Cup holder
- Phone holder
- Provision for a radio (antena and electric wiring already fitted)

Digging equipment

- Monobloc box welded fabricated boom
- Boom cylinder rod protection
- Integrated lifting point on the boom
- Monobloc box welded arms with casted ends
- Long-life steel bushings
- Hardened, pre-lubricated and corrosion resistant pins
- 50 hours greasing intervals

Instrumentation and monitoring

- High contrast colour 5" LCD display with day and night modes enabling good readability whatever lighting conditions
- Jogwheel for easy navigation and electric motor speed adjustment
- 3 working modes: Standard, ECO and Boost
- Built-in anti-theft feature
- Several warning messages, coupled to needed action, in the event of malfunction
- Volvo Telematic System

Service and Maintenance

Tool Kit

Official approval

- Machine conforming to European directive 2006/42/EC.
- Noise emissions in the environment conforming to directive 2000/14/EC.
- Hand Arm Vibrations - Whole Body Vibrations compliant with directive 2002/44/EC.
- Electromagnetic compatibility (EMC) conforming to European directive 2004/108/EC and its amendments.
- Object handling device conforming to EN 474-1 and EN 474-5 standards.
- FOPS on top level 1 conforming to ISO 10262 standard.
- TOPS conforming to ISO 12117 and EN 13531 standards.
- ROPS conforming to ISO 3471-1 and / SAE J1040 standards.
- OPG 1 conforming to ISO 10262 standard (when equipped).
- OPG 2 conforming to ISO 10262 standard (when equipped).

OPTIONAL EQUIPMENT

Operator environment

- Canopy
- Heated cab
- Vinyl or fabric seat, lumbar adjustment, high backrest and retractable seat belt
- 3" Seat Belt
- ISO / SAE control pattern change
- Radio AM/FM, AUX, USB, Bluetooth
- Radio AM/FM/DAB, AUX, USB, SD MP3, Bluetooth
- Additional lockable storage box (behind the seat)

Electric / Electronic control system

- Off-board Fast charger IP54 360A – 17.3kW Outdoor
- Off-board Fast charger IP21 200A – 9.6kW Indoor
- Off-board Fast charger IP21 360A – 17.3kW Indoor

Machine exterior

- Full LED worklights package - Front and rear of the cab, boom and rotating beacon
- Several levels of paint customisation (RAL specifications) to match with your corporate identity
- Green beacon linked to seat belt
- Front canopy guard (OPG1)

OPTIONAL EQUIPMENT

Hydraulic system

- Boom & arm safety lifting valves with overload indicator
- Boom, arm and dozer blade safety lifting valves with overload indicator
- Safety valve certification
- Bio hydraulic oil VG46 (PANOLIN®)
- Hydraulic oil VG32
- Bio hydraulic oil VG32 (PANOLIN®)
- Hydraulic oil VG68
- Second accessory circuit
- Flat face hydraulic quick couplings
- Single-acting hydraulic circuit for accessories
- Double-acting hydraulic circuit for accessories
- Hydraulic drain for accessories

Digging equipment

- Short arm 1 050 mm
- Long arm 1 350 mm

Attachments

- S-type mechanical quick coupler (S40)
- S-type hydraulic quick coupler (S40)
- Volvo quick coupler mechanical (pin-on)
- Extra pin kit
- Lehnhoff® Quick Coupler Mechanical (MS03)
- General purpose buckets (250 mm, 34L up to 750 mm, 119L)
- Aggressive cut buckets (350 mm, 50L / 550 mm, 95L)
- Fix ditching buckets (1 200mm, 125 L / 1300mm, 141L)
- Tilttable ditching buckets (1200 mm, 125 L)
- Hydraulic breaker HB03LN

SELECTION OF VOLVO OPTIONAL EQUIPMENT**Specific colors****Secondary Accessory Circuit****Safety valves****Fast charger**

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