

Volvo Electric Compact Excavators 2.68 - 2.78 t

ECR25 ELECTRIC

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Increase your uptime with this short swing radius electric compact excavator. All the power but none of the emissions as its diesel equivalent.



A compact game changer

The Volvo ECR25 Electric is a true game changer: the electric compact excavator takes a proven concept and then adds battery electric power. An electric model is perfect for working in limited spaces, because with no emissions there is no need for an exhaust extraction system. While getting the same performance as its diesel equivalent, you can recharge ECR25 Electric during your lunch and operate for four hours straight, wasting no time to refuel specifically.

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



Flexible charging solutions

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



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



Zero emission

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

Reduced maintenance



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

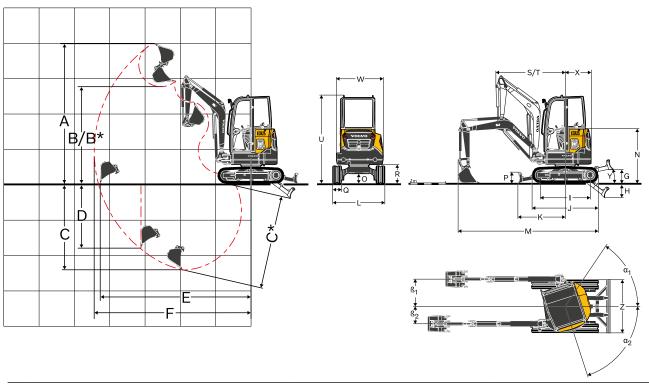
Volvo ECR25 Electric in detail

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	1800
Operating mode max. / Boost	r/min	2 400
Swing System		
Max, slew speed	r/min	9.4
Max, slew torque	daNm	485
Digging Performances		
Standard bucket width (blade, W/O side cutter)	mm	500
Standard bucket mass	kg	59
Standard bucket rated capacity	1	74
Bucket rotation	0	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
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	٥	30

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
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
Service Refill		
Hydraulic system, total	- 1	33
Hydraulic tank	- 1	23
Travel reduction unit	- 1	2 x 0.6
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
Sound Level		
Interior sound level according to ISO 6396		
LpA	dB	74
External sound level according to ISO 6395 and (2000/14/EC) and 474-1:2006 +A1:2009	EU Noise	Directive
LwA	dB	84



Specifications



DIN	ENSIONS						
Des	cription	Unit ECR25 Electric					
Arm		mm	1050	1350			
Α	Maximum cutting height	mm	4 010	4 183			
В	Maximum dump height	mm	2 784	2 957			
В*	Maximum bucket clearance	mm	2 897	3 070			
С	Digging depth	mm	2 461	2 761			
C*	Maximum digging depth	mm	2 672	2 965			
D	Maximum vertical wall digging depth	mm	1832	2 119			
Ε	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	4	01			
Н	Lowest position dozer blade	mm	42	22			
1	Tumbler length	mm	1 4	40			
J	Track length	mm	19	06			
K	Dozer blade, maximum reach at ground level	mm	13	65			
L	Overall width with 300 mm rubber tracks	mm	1 5	50			
М	Overall length	mm	4 008	3 876			
M	Transport length	mm	4 595	4 525			
Ν	Overall height of engine hood	mm	1.5	70			
0	Minimum ground clearance	mm	29	90			
Р	Dozer blade height	mm	312				
Q	Shoe width (rubber)	mm	300				
R	Ground clearance to superstructure	mm	55	54			
S	Front slew radius	mm	2 0	002			
Т	Front slew radius with maximum offset	mm	1 5	55			
U	Overall height cab	mm	2 5	335			
W	Overall width of superstructure	mm	13	40			
Χ	Tail slew radius	mm	75	50			
Υ	Angle of approach	o	3	4			
Z	Dozer blade width	mm	1 5	50			
α1	Maximum boom swing angle to the left	o	7	2			
β_{1}	Maximum boom offset to the right	mm	78	34			
α_2	Maximum boom swing angle to the right	o	5	6			
β_2	Maximum boom offset to the left	mm	49	96			

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.

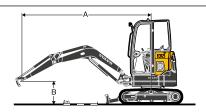
The below values are in compliance with ISO standard 10567. They do not exceed 75% of the tipping load or 87% of the hydraulic limit with the machine on firm level ground.

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

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.



_			Lifting point radius (A)									
Along undercarriage	Lifting point height (B)		2.0 m		3.0 m			Max. reach			Max.	
Across undercarriage				Ė		Ů	Ů		Ů	Ė		m
				+EC		FC	+EC		PC	+ EC		
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	1602*	848	496	934*	474	374	758*	358	3.706
	-1 m	kg	914	1546*	858	501	850*	477	471	850*	449	3.144
Arm: 1350 mm Counterweight: Standard	2 m	kg	-	-	-	500*	500*	500*	347	508*	332	3.971
	1 m	kg	942	1334*	884	514	715*	489	319	577*	306	4.142
	0 m	kg	894	1608*	838	492	897*	468	330	623*	316	4.002
	-1 m	kg	897	1 659*	840	488	902*	464	397	693*	379	3.502

		Grid	Machine side			
Charging times ECR25 Electric		Electric po	Charging socket			
	Туре	ype Voltage Current Power outlet				
FAST CHARGING With off-board DC fast charger	3P+N+E	400 V	32 A (=>360A)	•	00	10-80% : 55 min
Max. charger output power/current : -9.6 kW/200 A -17.3 kW/360A			16 A (=>200 A)	IEC60309	DIN	10-80% : 1h 20 min
OVERNIGHT CHARGING With standard AC on-board charger Max. charger output power: -3 kW		230 V	16 A	© © IEC60309	Type 2	5h
	1P+N+E		13 A			5h 30 min
			10 A	Type E		7h 15 min
			8 A	.,,		9h
			6 A	Type F Type G	,,	12h 15 min
Charging station and wall box	'			Type 2 AC	Type 2	5h

Equipment

STANDARD EQUIPMENT

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

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

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

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

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

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 hydaulic 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 1350 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)

Tiltable ditching buckets (1200 mm, 125 L)

Hydraulic breaker HB03LN

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Specific colors



Safety valves





Secondary Accessory Circuit



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