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Volvo Compact Excavators 1.79-2.06 t

ECR18 ELECTRIC

Volvo Construction Equipment

ECR18 ELECTRIC

Low noise, zero emissions and an ergonomically designed cab make the ECR18 Electric quiet, clean and comfortable. A perfect fit for a modern work site.



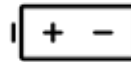
Packed with power

The ECR18 Electric boasts low noise and zero-tailpipe emissions, creating new opportunities for your business. Now you can operate in noise sensitive areas, out of standard hours, on low-carbon projects or indoors, without the need for costly fume extraction systems. Enjoy an enhanced operator experience with ergonomic and intuitive controls, unrivalled performance in combined movements and best-in-class stability.



Flexible charging solutions

- Safe and standard Electric Vehicles (EV) charging protocol
- 10 to 100% in under 5 hours on 240V level 2 charging
- 10 to 80% in less than 45 minutes with standard DC fast charging
- Supported by Electric Machine Management Application



Premium battery

- 48V lithium-ion battery
- 2 to 5 hours of run time
- Maintenance-free battery
- Designed to deliver up to 2 000 full charge cycles



Operator comfort

- Spacious and uncluttered cab
- Superior visibility, low vibration
- 5" color display with jog wheel navigation
- Extensive information and customization abilities
- Simplified menu option for large fleet owners
- Fingertip controls, with adjustable hydraulic flow



Zero emission

- No emission locally
- Sound level down – 80 dB external noise L_{WA}
- Low electricity cost
- No power consumption when machine not working

Volvo ECR18 Electric in detail

Electrical system		
Battery Type	Lithium-ion	
Battery Voltage	V	48
Battery capacity	kWh	16
	Ah	360
Indicative runtime (depending on application)	hours	up to 5
Auxiliary Battery Voltage	V	12
Electrical Motor		
Motor type	Permanent magnet	
Motor power (peak)	kW	18
Motor power (continuous)	kW	12.5
Operating mode max. / Standard	r/min	2 400
Operating mode max. / Eco	r/min	1 900
Operating mode max. / Boost	r/min	2 700
Swing System		
Max, slew speed	r/min	9.5
Max, slew torque	daNm	243
Digging Performances		
Standard bucket width (blade, W/O side cutter)	mm	450
Standard bucket mass	kg	33
Standard bucket rated capacity	l	36
Bucket rotation	°	196
Bucket breakout force (ISO)	daN	1 290
Short arm tearout force (ISO)	daN	795
Long arm tearout force (ISO)	daN	695
Travel System		
Max, drawbar pull	daN	1 300
Max. travel speed low	km/h	1.6
Max. travel speed high	km/h	4.0
Gradeability	°	30

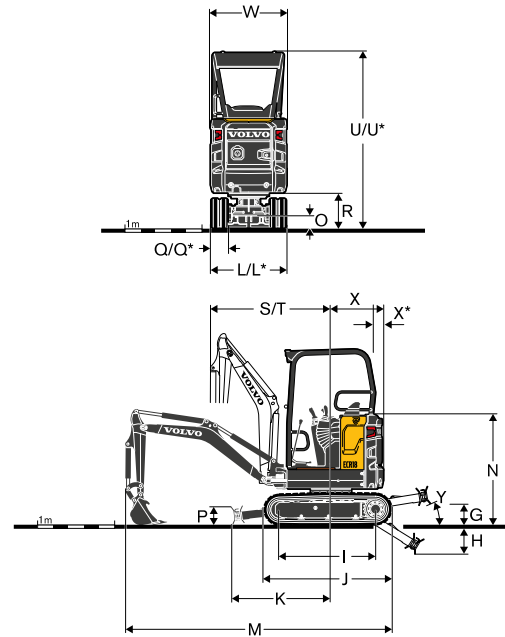
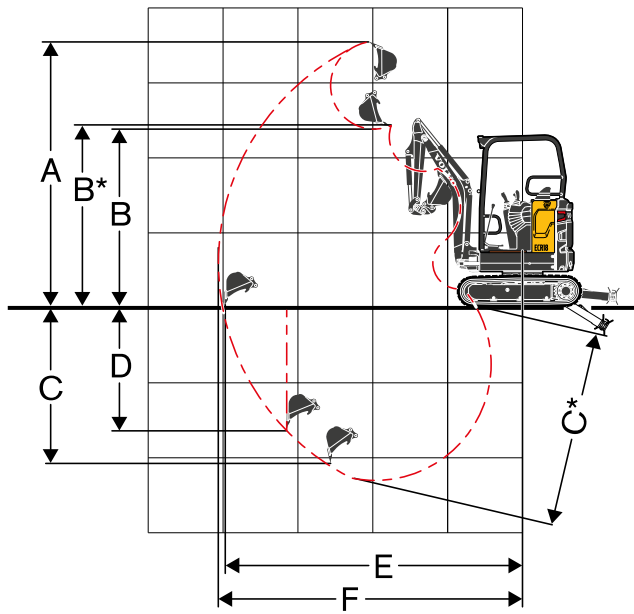
Hydraulic system		
Maximum system flow	l/min	34
Maximum flow for accessories	l/min	30
Maximum flow for 2nd accessory circuit	l/min	
Maximum operating pressure	MPa	17
Weight and Ground Pressure		
Operating weight according to ISO 6016	kg	1 795
Ground pressure (cab)	kPa	
Ground pressure (canopy)	kPa	27
Transport weight	kg	1 720
With rubber tracks	mm	230
With short arm	mm	950
With canopy	-kg	
With long arm	+kg	4
With long arm and heavy counterweight	+kg	42
With heavy counterweight	+kg	38
With steel tracks	+kg	32
Service Refill		
Hydraulic system, total	l	21
Hydraulic tank	l	15
Undercarriage		
Bottom/top rollers per side	3 / 0	
Track tension	By grease piston	
Blade (width x height)	mm	1 340 x 230

Attachments specifications																
		General Purpose buckets							Aggressive Cut buckets			Ditching buckets				Hydraulic breaker HBO2 Low Noise
	Unit											Fixed		Tiltable		
Quick Coupler type	mm	200	250	300	400	450	500	600	350	550*	550	850	1000	850	1000	-
Volvo mechanical (pin-on)	l	14	19	23	32	36	41	51	-	-	-	59	76	59	-	Pin-on bracket
Lehnhoff® mechanical	l	-	-	23	32	-	41	-	-	-	-	59	76	59	-	Lehnhoff type bracket
Mechanical, symmetrical type	l	-	-	-	-	-	-	-	25	55	55	-	76	-	76	Symmetrical type bracket

*with teeth

For more details, see Attachments catalogue

Specifications










DIMENSIONS

Description		Unit	ECR18 Electric	
Arm		mm	950	1 150
A	Maximum cutting height	mm	3 442	3 582
B	Maximum dump height	mm	2 444	2 588
B*	Maximum bucket clearance	mm	2 482	2 625
C	Digging depth	mm	2 234	2 434
C*	Maximum digging depth	mm	2 528	2 727
D	Maximum vertical wall digging depth	mm	1 898	2 091
E	Maximum digging reach at ground level	mm	3 921	4 113
G	Highest position dozer blade	Short blade	225	
		Long blade	267	
H	Lowest position dozer blade	Short blade	267	
		Long blade	386	
J	Track length	mm	1 620	
K	Dozer blade, maximum reach at ground level	Short blade	1 082	
		Long blade	1 272	
L	Overall width with 230mm tracks	Min	995	
		Max	1 352	
M	Overall length	mm	3 431	3 309
M*	Transport length (arm lowered)	Short blade	3 932	3 944
		Long blade	4 122	4 134
P	Dozer blade height	mm	231	
Q	Shoe width (rubber)	mm	230	
Q ⁽¹⁾	Shoe width (steel)	mm	230	
R	Ground clearance to superstructure	mm	456	
S	Front slew radius	mm	1 575	1 568
T	Front slew radius with maximum offset	mm	1 269	1 287
U*	Overall height canopy	mm	2 298	
X	Tail slew radius	mm	688	
X*	Rear overhang (across tracks)	mm	12	
β ₁	Maximum boom offset to the right	mm	516	
β ₂	Maximum boom offset to the left	mm	640	

⁽¹⁾ Option

Specifications

Charging times ECR18 Electric	Grid side					Machine side
	Electric power supply				Charging socket	
	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)	 IEC60309	 DIN	10-80% : 45 min
			16 A (=>200 A)			10-80% : 1h 5 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	4h45 min
			13 A	 Type E		5h 15 min
			10 A			6h45 min
			8 A			8h 30 min
			6 A	 Type F  Type G		11h 15 min
			Charging station and wall box			

Equipment

STANDARD EQUIPMENT

Drivetrain

Automatic two-speed travel hydraulic motors with reduction gears
Inner flange bottom 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

Swing System

Radial piston hydraulic motor with integrated shockless valve
Automatic multi-disc spring applied hydraulic released slew brake
Centralized and remote lubrication of crown wheel and ball bearing

Superstructure

Stamped steel panels all-around, recessed 5 to 15mm
4 integrated tie-down points on upper structure

Undercarriage

Box welded fabricated frame
Sturdy removeable protecting covers for track motors and slew system
Box section highly rigid dozer blade structure

Hydraulic system

High performance Volvo Hydraulic System
Flow-Sharing and Load Sensing main control valve
Boom cylinder cushioning at end stroke (up)
Patented filtering and filling element
Large side by side oil cooler and radiator
Double-acting hydraulic circuit for accessories
Breaker/Shear valve
Hydraulic hoses routed inside the boom for increased protection

Canopy

Robust 4-pillar structure canopy
Cushionned operator station
Highly visible orange footstep
Highly visible orange seatbelt with warning indicator
Warning beacon, flashing LED
Front cabin LED worklight
Right and left rear-view mirror
White noise travel alarm
Toolbox with integrated storage for operator's manual and lockable door

Digging equipment

Casted end and structural parts on arm, pivot, undercarriage and upper structure noze
Monoblock box welded fabricated boom and arm
Long-life steel bushings & hardened, pre-lubricated and corrosion resistant pins
50-hours intervals on all grease points

Machine controls

Automatic locking device for pilot controls and travel levers when the left console is raised
Proportional and adjustable fingertip control for boom offset and auxiliary circuit
Pressure accumulator to lower the equipment on the ground

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
Simplified menus with master profile for full control and user profile with limited customization
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

STANDARD EQUIPMENT

Official approval

Machine conforming to European directive 2006/42/EC
Low voltage certified according to European directive 2014/35/EU
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 2014/30/EU
Object handling device conforming to EN 474-1 and EN 474-5 standards
ROPS (Roll-Over Protective Structure) conforming to ISO 3471
TOPS (Tip-Over Protective Structure) conforming to ISO 12117 and EN 13531 standards
OPG 1 (Operator Protective Guard on top) conforming to ISO 10262 standard (when equipped)
FOPS (Falling Object Protective Structure) conforming to EN ISO 3449

OPTIONAL EQUIPMENT

Operator environment

Vinyl seat with mechanical suspension, extended back with lumbar adjustment and 2" orange retractable seatbelt
Additional lockable storage box (behind the seat)
Electrical switch for ISO/SAE control pattern change
Controls lock, switch
Controls lock, seat operator presence and switch
Controls lock, seatbelt sensor
Tool kit

Machine exterior

LED worklights package
Green beacon link to safety belt
Heavy counterweight
Several level of customisation (RAL specifications) to match with your corporate identity

Undercarriage

230mm (0'9") rubber tracks
230mm (0'9") steel tracks
Short dozer blade
Long dozer blade

Hydraulics

Relief valve for auxiliaries
Kit 2 flat face hydraulic couplings
Double acting circuit for hydraulic quick couplers
Boom and arm safety lifting valves
Boom, arm and dozer blade safety lifting valves
Several grades of mineral and bio hydraulic oil

Digging equipment

Short arm
Long arm

Machine controls

On/Off fingertip control for boom offset and auxiliary circuit
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Attachments

Volvo mechanical quick coupler (pin-on)
Lehnhoff® mechanical quick coupler
Symmetrical type mechanical quick coupler (S30)
General Purpose buckets
Fixed Ditching buckets
Tilttable Ditching buckets
Hydraulic breaker HB02LN

Charging solutions

Fast charger, 9.6 kW, indoor use
Fast charger, 17.3 kW, indoor use
Fast charger, 17.3 kW, outdoor use

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