Volvo Construction Equipment
Building Tomorrow

EC18E

Volvo Compact Excavators 1.73-2.10 t 16.3 hp



Light work of tough jobs

A small machine packed with big features, the EC18E is designed to promote low operating costs. Built for durability and easy to service, this compact excavator will make light work of tough jobs.

Small but tough

The unique high-profile counterweight design is made from three strong pieces of cast iron which wrap around the rear of the machine, protecting all vital components. All-around steel panels, recessed 10mm from the counterweight, offer further protection.



Best-in-class serviceability

Complete maintenance tasks with speed thanks to the hinged fuel tank which enables an impressive ease of access to the engine compartment, and easy to locate daily check points. A 50-hour greasing interval further contributes towards the best-in-class serviceability of this machine.



Safety first

Safety is built-in to the machine with a ROPS/TOPS/FOPS cab and canopy, a large entrance including high visibility step, and an orange seatbelt as standard for easy checks by site managers.



The operator's choice

The roomy and uncluttered cab is designed to keep operators comfortable and productive, while its flat floor makes it easy to keep clean. Superior visibility, simple layout of the controls, fingertip controls and large travel pedals contribute towards the great ease of operation.





SMALL MACHINE, BIG PERFORMANCE

Take performance to a new level, with a 13% increase in traction force and 2 130kg of combined digging forces. The 11% longer undercarriage contributes to even better all-around lifting capacity and stability, compared to the previous generation. Add in the smooth combination of movements which make grading jobs easier, as well as the ability to work close to the blade, and completing tasks on site has never been quicker.

The ultimate all-arounder

Go where other machines cannot thanks to the compact design of the EC18E. Easy to operate and easy to transport, this 1.8t excavator is the perfect choice when a compact machine is right for your application.



Transport with ease

Transportation of the machine is safe and secure, thanks to its light weight and convenient design. With automatic slew lock and four easily accessed large tie-down points on the upper frame, the machine can be safely transported on a small trailer with up to three buckets and a hydraulic breaker, while maintaining a total transport weight of less than 2t.



Smooth loading

Thanks to its optimized weight balance, redesigned undercarriage with longer tracks, automatic two speed travel and large hydraulic pedals, the EC18E will smoothly load on to a trailer. Carry multiple buckets with ease with the Volvo bucket transportation system.



Compact by design

With a variable undercarriage that retracts to less than 1m and expands up to 1.35m, combined with a reduced machine height to less than 2.35m, you can count on the compact excavator to deliver superior performance when working in confined spaces. The machine design ensures that the right frame corner, swing post and cylinder stay within the tracks, resulting in maximum visibility and a reduced risk of machine damage when working alongside obstacles.



Perfect control

Experience precise, smooth and effortless command of the boom offset and auxiliary hydraulic flows with proportional fingertip controls. The easy-to-use joystick allows you to fine-tune the maximum hydraulic flow of any attachment to ensure ideal speed and power for any task.

Compact versatility

SMALL MACHINE, BIG PERFORMANCE

- 13% increase in traction force
- 2 130 kg combined digging forces
- Improved lifting capacity by an average of 22% to the front
- 140mm increase in digging depth

SMALL BUT TOUGH

- All-around steel panels **NEW**
- High-profile cast counterweight **A VOLVO EXCLUSIVE**
- Boom cylinder on top
- Protected hoses, routed inside the boom
- In-track boom swing



SAFETY FIRST

- High visibility entry step and cab handrail, orange seatbelt **A VOLVO EXCLUSIVE**
- 4 large easily accessible tie-down points on the upper frame **NEW**
- Controls lock options (switch, seat operator presence or buckled seatbelt sensor) **A VOLVO EXCLUSIVE**
- Easy entrance-exit to cab

VERSATILE PERFORMANCE

- Secondary accessory circuit **A VOLVO EXCLUSIVE**
- Double acting circuit for hydraulic quick coupler **NEW**
- Variable undercarriage, under 1-meter wide

THE OPERATOR'S CHOICE

- Easy front window opening with lower window removal and storage ability **NEW**
- Fingertip controls, with adjustable hydraulic flow **A VOLVO EXCLUSIVE**
- Simple controls layout
- Automatic 2-speed travel
- Smooth combined movements



MAXIMIZE PROFITABILITY

- Convenient access to engine compartment thanks to hinged fuel tank **A VOLVO EXCLUSIVE**
- Auto engine shutdown and auto-idle (options) **A VOLVO EXCLUSIVE**
- All-around flat windows
- 50-hour greasing intervals
- Patented hydraulic filter

THE COMPLETE PACKAGE

- Range of Volvo buckets and quick couplers
- Matched Volvo breaker
- Genuine Volvo Parts
- Volvo Financial Services

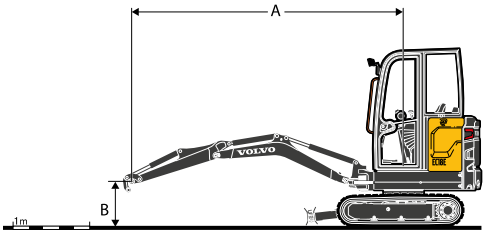
Volvo EC18E in detail

Engine		
Engine		D0.9A
Max. power at	r/min	2 300
Gross	kW	12
	hp	16.3
	According to ISO 2534 / SAE J1995	
Max. torque	Nm	52
at engine speed	r/min	1 800
No. of cylinders		3
Displacement	cm³	898
Bore	mm	72
Stroke	mm	73.6
Compression ratio		24
Electrical system		
Voltage	V	12
Battery	V	1 x 12
Battery capacity	Ah	42 - 70
Alternator	V/Ah	12/40
Swing system		
Max, slew speed	r/min	9.5
Max, slew torque	daNm	243
Undercarriage		
Bottom/top rollers per side		3 / 0
Track tension		By grease piston
Blade (width x height)	mm	1 340 x 230
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

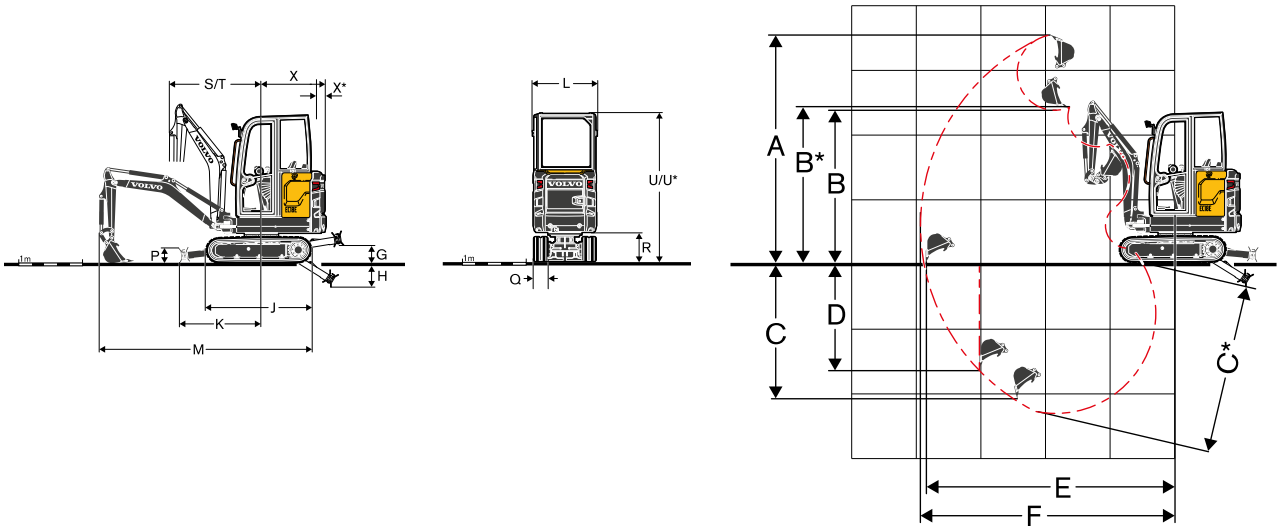
Weight and Ground Pressure		
Operating weight according to ISO 6016	kg	1 810
Ground pressure (cab)	kPa	28.4
Transport weight	kg	1 735
With rubber tracks	mm	230
With short arm	mm	950
With fuel tank capacity	%	100
With canopy	-kg	84
With long arm	+kg	4
With heavy counterweight	+kg	38
With steel tracks	+kg	78
Hydraulic system		
Pump type		Piston pump / Gear pump
Maximum system flow	l/min	48 / 34
Maximum flow for accessories	l/min	43 / 30
Maximum flow for 2nd accessory circuit (option)	l/min	23
Maximum operating pressure	MPa	17
Travel System		
Max, drawbar pull	daN	1 300
Max. travel speed low	km/h	1.8 / 2.5
Max. travel speed high	km/h	3.5 / 4.6
Gradeability	°	30
Service Refill		
Fuel tank	l	21
Hydraulic system, total	l	21
Hydraulic tank	l	15
Sound Level		
Interior sound level according to ISO 6396		
LpA	dB(A)	78
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:200		
LwA	dB(A)	93

LIFTING CAPACITY EC18E

These capacities are given for a machine equipped with a cabin, 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 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 height (B) m		Lifting point radius (A) 2.0 m		3.0 m		Max reach		Max. m
Arm: 950mm + Dozer blade up	2	kg	-	-	-	-	278*	278*	2.95
	1	kg	448*	448*	292*	292*	263*	263*	3.32
	0	kg	542*	542*	294*	294*	247*	247*	3.28
	-1	kg	423*	423*	-	-	239*	239*	2.81
Arm: 950mm + Dozer blade down	2	kg	-	-	-	-	278*	278*	2.95
	1	kg	448*	448*	292*	292*	263*	263*	3.32
	0	kg	542*	542*	294*	294*	247*	247*	3.28
	-1	kg	423*	423*	-	-	239*	239*	2.81
Arm: 950mm + Dozer blade down + Heavy counterweight	2	kg	-	-	-	-	278*	278*	2.95
	1	kg	448*	448*	292*	292*	263*	263*	3.32
	0	kg	542*	542*	294*	294*	247*	247*	3.28
	-1	kg	423*	423*	-	-	239*	239*	2.81
Arm: 1 150mm + Dozer blade up	2	kg	-	-	241*	241*	245*	245*	3.17
	1	kg	373*	373*	276*	276*	240*	240*	3.52
	0	kg	548*	548*	297*	297*	228*	228*	3.48
	-1	kg	452*	452*	232*	232*	222*	222*	3.05
Arm: 1 150mm + Dozer blade down	2	kg	-	-	241*	241*	245*	245*	3.17
	1	kg	373*	373*	276*	276*	240*	240*	3.52
	0	kg	548*	548*	297*	297*	228*	228*	3.48
	-1	kg	452*	452*	232*	232*	222*	222*	3.05
Arm: 1 150mm + Dozer blade down + Heavy counterweight	2	kg	-	-	241*	241*	245*	245*	3.17
	1	kg	373*	373*	276*	276*	240*	240*	3.52
	0	kg	548*	548*	297*	297*	228*	228*	3.48
	-1	kg	452*	452*	232*	232*	222*	222*	3.05



DIMENSIONS

Description			Unit	EC18E	
Arm			**mm**	**950**	**1 150**
A	Maximum cutting height		mm	3 439	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	2 500	2 700
D	Maximum vertical wall digging depth		mm	1 898	2 091
E	Maximum digging reach at ground level		mm	3 800	3 993
G	Highest position dozer blade	Short blade	mm	225	
		Long blade	mm	267	
H	Lowest position dozer blade	Short blade	mm	296	
		Long blade	mm	386	
J	Track length		mm	1 620	
K	Dozer blade, maximum reach at ground level	Short blade	mm	1 082	
		Long blade	mm	1 272	
L	Overall width with 230mm tracks	Min	mm	995	
		Max	mm	1 352	
M	Overall length		mm	3 550	3 431
M*	Transport length (arm lowered)	Short blade	mm	3 810	3 824
		Long blade	mm	4 000	4 014
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	1 455	1 476
T	Front slew radius with maximum offset		mm	1 181	1 184
U	Overall height cab		mm	2 334	
U*	Overall height canopy		mm	2 298	
X	Tail slew radius		mm	1 018	
X*	Rear overhang (across tracks)		mm	342	
β1	Maximum boom offset to the right		mm	419	
β2	Maximum boom offset to the left		mm	525	

(1) Option

ATTACHMENTS SPECIFICATIONS

		General Purpose buckets							Aggressive Cut buckets			Ditching buckets				Hydraulic breaker HB02 Low Noise
	Unit											Fixed		Tiltable		
Quick Coupler type	**mm**	**200**	**250**	**300**	**400**	**450**	**500**	**600**	**350**	**550***	**550**	**850**	**1 000**	**850**	**1 000**	**-**
Volvo mechanical (pin-on)	I	14	19	23	32	36	41	51	-	-	-	59	76	59	-	Pin-on bracket
Lehnhoff® mechanical	I	-	-	23	32	-	41	-	-	-	-	59	76	59	-	Lehnhoff type bracket
Mechanical, symmetrical type	I	-	-	-	-	-	-	-	25	55	55	-	76	-	76	Symmetrical type bracket

*with teeth

For more details, see Attachments catalogue

Equipment

STANDARD EQUIPMENT

Engine

- Low emission, water-cooled, Volvo 3-cylinder diesel engine, meeting EPA Tier 4 and EU Stage V environmental regulations
- Starter motor protected against ignition when engine is already running
- Automatic engine cut-off in case of overheating or low oil level
- Engine starting safety device: the left console must be raised to operate the starter
- Dry-type single element air filter
- Water separator and translucent fuel filter
- Plastic tank with drain plug

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 battery
- IP67 protected electrical system and high quality connectors
- Battery disconnect connector
- Two working lights on cab version
- Working light on the canopy frame
- 12V power socket in cab with cellular phone storage

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 10 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
- Hydraulic hoses routed inside the boom for increased protection
- Plastic tank with drain plug

Cab / Canopy

- Cushionned operator station
- Large entrance access
- Large and roomy uncluttered floor
- Highly visible orange footstep
- Highly visible orange seatbelt with warning indicator on display
- Toolbox with integrated storage for operator's manual and lockable door

Cab

- Highly visible orange handrail
- Flat toughened glass all-around
- Gas-strut assisted front window opening
- Front windscreen wiper and washer nozzle
- Right hand side sliding window
- Heating systems with in-cab adjustment of temperature and air flow, and multiple air vents
- Filtered air inlet
- Radio preparation (antenna, wire harness)

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

STANDARD EQUIPMENT

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
- Large travel pedals
- Breaker (full flow) toggle switch on right joystick
- Pressure accumulator to lower the equipment on the ground

Instrumentation and monitoring

- Permanent digital hour meter visible from outside cab
- Warning lights for hydraulic filter and air filter restriction
- Engine temperature and fuel level gauges

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
- ROPS (Roll-Over Protective Structure) conforming to ISO 3471-1 and SAE J1040 standards
- 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)

OPTIONAL EQUIPMENT

Engine

- Dual stage air filter
- Auto idling system
- Engine auto shut-down with time adjustment

Operator environment

- Robust 4-pillar structure canopy
- Heated cab
- Vinyl seat with mechanical suspension, low back and 2" orange seatbelt
- Vinyl seat with mechanical suspension, extended back with lumbar adjustment and 2" orange retractable seatbelt
- Vinyl seat with mechanical suspension, extended back with lumbar adjustment and 3" retractable seatbelt
- Fabric seat with mechanical suspension, low back and 2" orange seatbelt
- Fabric seat with mechanical suspension, extended back with lumbar adjustment and 2" orange retractable seatbelt
- Fabric seat with mechanical suspension, extended back with lumbar adjustment and 3" retractable seatbelt
- Additional lockable storage box (behind the seat)
- Electrical switch for ISO/SAE control pattern change
- Travel alarm
- Radio, AUX, USB, Bluetooth
- Radio DAB, USB, Bluetooth, MP3
- Anti-theft, code lock
- Anti-theft, coded key
- Controls lock, switch
- Controls lock, seat operator presence and switch
- Controls lock, seatbelt sensor
- Front guard OPG1 for canopy
- Severe-duty guards for cab (OPG2, front & top)

OPTIONAL EQUIPMENT
Tool kit
Machine exterior
Left/Right rearview mirror
One protected worklight on the boom
One rear worklight
Rotating beacon
One protected worklight on the boom LED
One rear worklight LED
LED worklights package
Warning beacon, flashing LED
Green beacon link to safety belt
Heavy counterweight
Several level of customisation (RAL specifications) to match with your corporate identity
Undercarriage
230mm rubber tracks
230mm steel tracks
Short dozer blade
Long dozer blade

OPTIONAL EQUIPMENT
Hydraulics
Relief valve for auxiliaries
Breaker/Shear valve
Hydraulic drain for accessories
Second accessory circuit with proportional and adjustable controls
Kit 2 flat face hydraulic couplings
Kit 4 flat face hydraulic quick couplings
Double acting circuit for hydraulic quick couplers
Boom and arm safety lifting valves
Boom, arm and dozer blade safety lifting valves
Safety valve certification
Mineral hydraulic oil VG32
Mineral hydraulic oil VG46
Mineral hydraulic oil VG68
Bio hydraulic oil VG32 (PANOLIN®)
Bio hydraulic oil VG46 (PANOLIN®)
Digging equipment
Short arm
Long arm
Machine controls
On/Off fingertip control for boom offset and auxiliary circuit
Attachments
Volvo mechanical quick coupler (pin-on)
Lehnhoff® mechanical quick coupler
Symmetrical type mechanical quick coupler (S30)
General Purpose buckets
Fixed Ditching buckets
Tiltable Ditching buckets
Hydraulic breaker HB02LN

SELECTION OF VOLVO OPTIONAL EQUIPMENT

LED lights and beacon



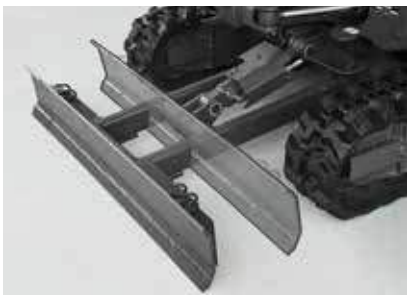
Anti-theft, coded key



Short or long arm



Short or long blade



Steel tracks



Auto-idle and auto engine shutdown



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.

Ref. No 20056712_B / English-21 / 2018.11 / CEX / Volvo, Global Marketing

VOLVO

Volvo Construction Equipment

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