

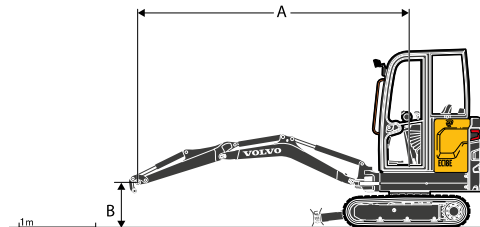
Volvo EC18E in detail

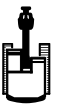
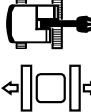
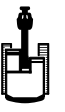
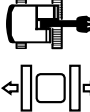
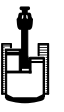
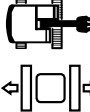
Engine		
Engine		D0.9A
Max. power at	r/min	2 300
Gross	kW	12
	hp	16.3
According to ISO 2534 / SAE J1995		
Max. torque	Nm	52
at engine speed	r/min	1 800
No. of cylinders		3
Displacement	cm ³	898
Bore	mm	72
Stroke	mm	73.6
Compression ratio		24
Electrical system		
Voltage	V	12
Battery	V	1 x 12
Battery capacity	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

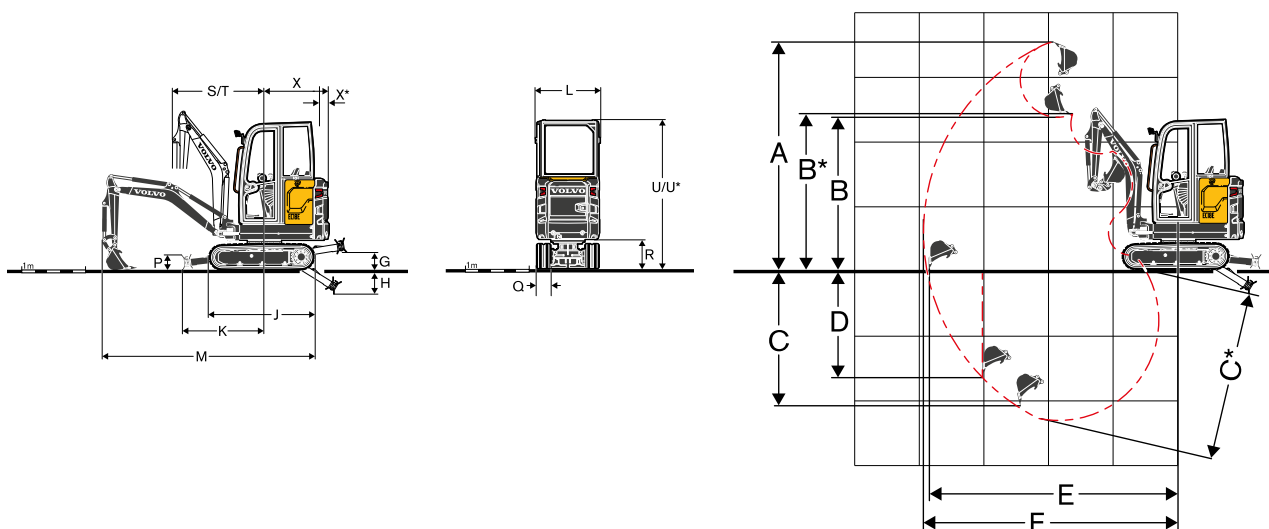
Weight and Ground Pressure		
Operating weight according to ISO 6016	kg	1 810
Ground pressure (cab)	kPa	28.4
Transport weight	kg	1 735
With rubber tracks	mm	230
With short arm	mm	950
With fuel tank capacity	%	100
With canopy	-kg	84
With long arm	+kg	4
With heavy counterweight	+kg	38
With steel tracks	+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)						Max. m
			2.0 m		3.0 m		Max reach		
									
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 Long blade	mm mm	225 267
H	Lowest position dozer blade	Short blade Long blade	mm mm	296 386
J	Track length	mm	1 620	
K	Dozer blade, maximum reach at ground level	Short blade Long blade	mm mm	1 082 1 272
L	Overall width with 230mm tracks	Min Max	mm mm	995 1 352
M	Overall length	mm	3 550	3 431
M*	Transport length (arm lowered)	Short blade Long blade	mm mm	3 810 4 000
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

	Unit	General Purpose buckets							Aggressive Cut buckets			Ditching buckets				Hydraulic breaker HB02 Low Noise
		200	250	300	400	450	500	600	350	550*	550	850	1 000	850	1 000	
Quick Coupler type	mm															-
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.