



# EC35D

Volvo Compact Excavators 3.5 t 31 hp



# Perform with precision

The EC35D features a comfortable cab and easy-to-use controls for high performance and precise operation. With its excellent hydraulic performance and easy serviceability you can do more for less in all applications.

## Optimized efficiency

For lower costs, increased productivity and maximum uptime a number of efficient features combine on the EC35D. ECO mode allows you to choose the right machine setting for the job at hand for impressive fuel efficiency. Robust design and quality digging equipment delivers durability and long term machine value. Auto idle and auto engine shut down reduce noise disturbance, fuel consumption, maintenance costs and slow down depreciation of your machine.



## Superior serviceability

The EC35D is built to ensure servicing is safe, quick and easy, featuring easy service access with wide-opening hoods, centralized lubrication and ground-level greasing points. The patented multifunction transparent hydraulic filter and extended greasing intervals of 50 hours, enhance machine availability and uptime.



## Hydraulics in harmony

The machine's state-of-the-art hydraulic system is perfectly matched to the premium Volvo engine delivering high performance and smooth operation. Intuitive fingertip controls enhance ease of operation, reduce fatigue and improve fluency. Adjust hydraulic flows in each direction from inside the cab for ultimate precision and versatility.



## Performance and precision

Increase your power and precision in all applications with the EC35D. The machine's outstanding lifting capacity and digging force deliver extra productivity and faster cycle times. Impressive tractive force and superior blade design delivers an increased performance when dozing. The float function, compatible with the angle blade, achieves a precise finish in grading applications.





# OPERATOR ENVIRONMENT



Operate in a best-in-class cab for superior operator comfort and less fatigue. The EC35D is equipped with a spacious operator environment offering excellent all-around visibility and an adjustable suspended seat and console. Most machine functions and settings can be quickly accessed through keypad and monitor for maximum control of your machine.



# BUILT READY



Get the most out of your machine. The EC35D is a perfect match with Volvo attachments allowing you to change hydraulic settings directly and easily from the keypad. For increased versatility and uptime, Volvo has a durable range of attachments so you can access more applications and effectively perform a variety of jobs.

# More than a machine

Tailored to your business and operations, choose from a wide range of Volvo attachments and Customer Solutions to improve your performance, productivity and versatility. Volvo offers a complete range of robust attachments for all working conditions and can offer a long-term partnership, protect your revenue and provide a full range of services using Genuine Volvo parts, delivered by passionate people.

## Quick Couplers

The mechanical and hydraulic universal quick couplers allow attachments to be changed quickly and efficiently. The hydraulic quick coupler's design allows it to be used for matched Volvo attachments as well as a broad range of offerings from different brands.



## Advanced attachment solutions

The machine is compatible with a range of hydraulic attachments, including thumb, breaker and tiltable ditching bucket for more advanced and specialist applications. Available from the factory or aftermarket, do not hesitate to contact your local Volvo dealer and benefit from leading expertise and advanced attachment solutions.



## Dealer support

For less downtime and expert care, Volvo proactively respond to your requirements faster and fully support your service and maintenance needs through its local workshops and on-site service vans. Your attentive Volvo dealer offers professional expertise and preventative maintenance solutions to keep you working and ensure more uptime.



## Genuine Volvo Parts

Our attention to detail is what makes us stand out and our leading parts availability ensures maximum uptime of your machine. For a long life, parts are extensively tested and approved because every part is vital for machine longevity and uptime.



# Perform with precision

## **Automatic engine shutdown**

This function automatically turns the engine off to reduce fuel consumption and cut engine operating hours when the machine is inactive for a pre-set amount of time.

## **Automatic travel speed**

Automatic two speed travel allows the operator to continually drive the machine at high speed. Speed is automatically reduced when traction is needed.

## **Ultimate lifting capacity**

Excellent stability and outstanding hydraulics ensure the machines are capable of lifting heavy loads.

## **50 hour greasing interval**

The greasing interval is 50 hours – therefore there is no need to re-grease between jobs.

## **BUILT READY**



Volvo's durable attachments have been purpose-built to deliver maximum productivity and long service life in combination with Volvo machines

## **In-track boom swing**

The swing post and cylinder stay within the tracks when in an offset position, avoiding the risk of damage to your machine when working alongside obstacles.



### Anti-theft system

To reduce the risk of theft, a code can be entered through the keypad to start the machine. It can be changed via the machine management system.

## OPERATOR ENVIRONMENT



The industry-leading, spacious Volvo FOPS1 on top, TOPS and ROPS cab boasts all around visibility, ergonomically positioned controls and excellent vibration and noise insulation.

### Suspended seat and console

The multi-adjustable seat and console are mounted on the same suspension and therefore move together – providing excellent shock and vibration absorption.

### Patented hydraulic filter

Filtration occurs when the tank is filled or topped up and before the oil returns via the drain lines. The transparent bowl enables easy oil level and contamination checks.

### Service access

The side position of the engine together with two, wide-opening hoods ensures safe and easy access to all components and service check points from ground level.

### ECO mode

By simply pressing a button, the unique Volvo ECO mode reduces fuel consumption by up to 10%.

### Customer Solutions

Volvo provides the right solutions throughout the entire life cycle of your machine to lower total cost of ownership.



# Volvo EC35D in detail

Engine		
Engine		Volvo D1.7A
Max. power at	r/min	2 200
Gross	kW	18.5
	hp	25.2
Gross power according to ISO 2534		
Max. torque	Nm	97
at engine speed	r/min	1 600
No. of cylinders		3
Displacement	cm <sup>3</sup>	1 647
Bore	mm	87
Stroke	mm	92.4
Compression ratio		20.5

Electrical system		
Voltage	V	12
Battery	V	1 x 12
Battery capacity	Ah	74
Alternator	V/Ah	12/60

Swing system		
Max, slew speed	r/min	9
Max, slew torque	daNm	710

Undercarriage		
Rubber track width	mm	300
Steel track width	mm	300
Bottom/top rollers per side		4/1
Track tension		by grease piston
Blade (width x height)	mm	1 780 x 368

Digging Performances		
Standard bucket width (blade, W/O side cutter)	mm	600
Standard bucket mass	kg	90
Standard bucket rated capacity	l	114
Bucket rotation	°	199
Bucket breakout force (ISO)	daN	3 289
Short arm tearout force (ISO)	daN	2 371
With short arm	mm	1 400
Long arm tearout force (ISO)	daN	2 060
With long arm	mm	1 700

Weight and Ground Pressure		
Operating weight according to ISO 6016	kg	3 530
Ground pressure (cab)	kPa	32.8
Ground pressure (canopy)	kPa	31.5
Transport weight	kg	3 455
With heated cab		
With direct-fit bucket		
With rubber tracks	mm	300
With short arm	mm	1 400
With fuel tank capacity	%	100
With thumb	+kg	64
With canopy	-kg	135
With extra counterweight	+kg	170
With long arm	+kg	15
With steel tracks	+kg	130
Steel tracks	mm	300

Hydraulic system		
Pump type	Variable displacement piston pump	
Maximum system flow	l/min	103
Maximum flow for accessories	l/min	65
Maximum pressure for accessories	MPa	22
Maximum flow for 2nd accessory circuit (option)	l/min	23
Maximum operating pressure	MPa	24

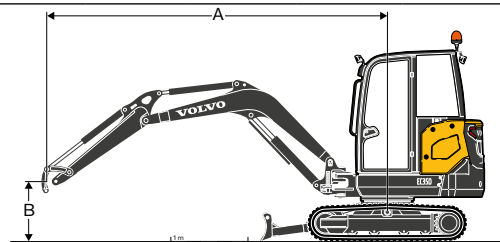
Travel System		
Max, drawbar pull	daN	3 100
Max. travel speed low	km/h	2.7
Max. travel speed high	km/h	4.5
Gradeability	°	20

Service Refill		
Fuel tank	l	64
Hydraulic system, total	l	62
Hydraulic tank	l	32
Engine oil	l	7
Engine coolant	l	7
Travel reduction unit	l	2 x 0.7

Sound Level		
Interior sound level according to ISO 6396		
L <sub>pA</sub>	dB	78
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009		
L <sub>WA</sub>	dB	94

## LIFTING CAPACITY EC35D

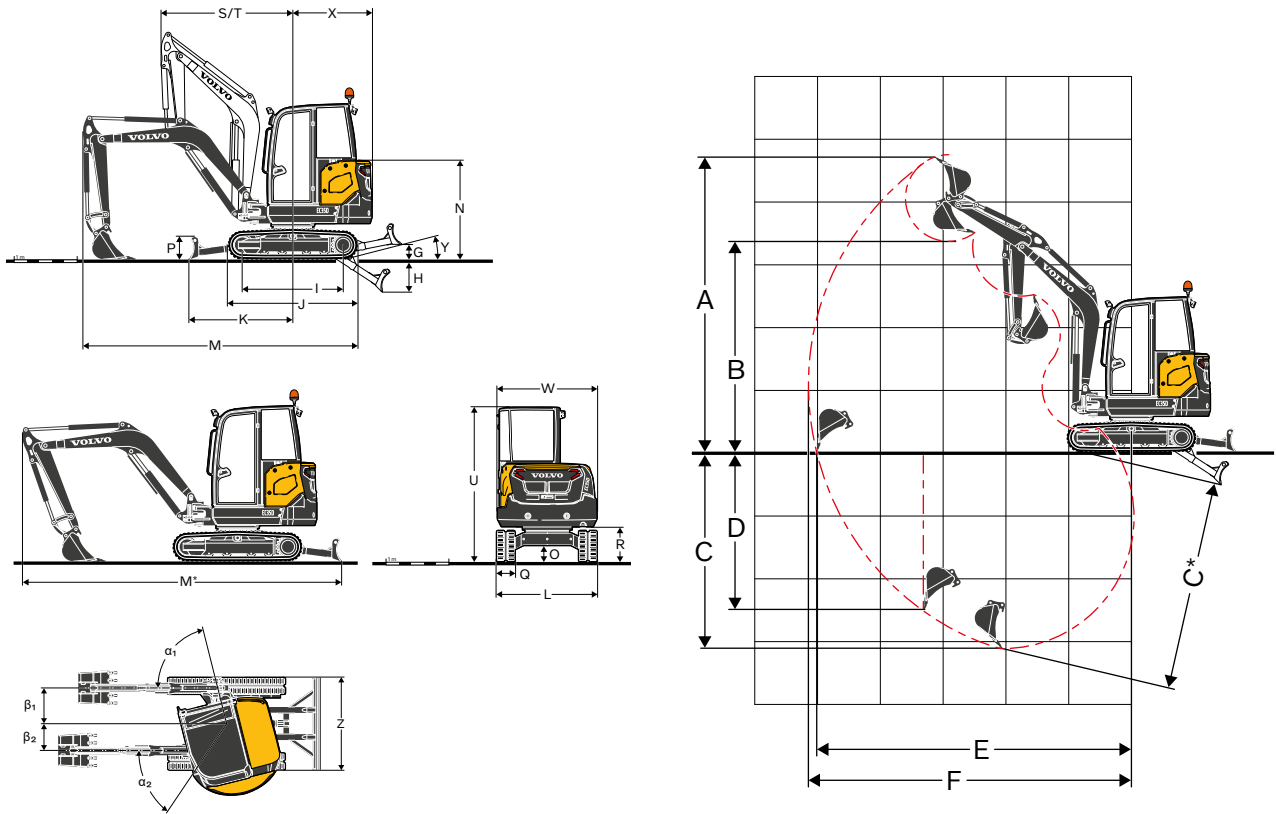
These capacities are given for a machine equipped with a cabin, 300mm rubber tracks and without a bucket or quick-coupler. The below values are in compliance with ISO standard 10567. They do not exceed 75% of the tipping load or 87% of the hydraulic limit with the machine on firm level ground. Loads 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.



	Lifting point height (B) m		Lifting point radius (A)								Max. m	
			2.0 m		3.0 m		4.0 m		Max. reach			
Arm: 1 400mm + Dozer blade up	3	kg								683	655	3.89
	2	kg			893*	893*	646	619	569	546	4.33	
	1	kg			955	908	626	600	533	512	4.46	
	0	kg	1 739	1 611	919	872	611	522	550	528	4.31	
	-1	kg	1 746	1 618	911	865			642	614	3.85	
	-2	kg	1 787	1 657					989	938	2.89	
Arm: 1 700mm + Dozer blade up	3	kg					665	638	608	583	4.22	
	2	kg			741*	741*	651	624	517	496	4.62	
	1	kg	1 807	1 675	956	908	625	599	486	466	4.74	
	0	kg	1 712	1 586	908	861	603	577	496	476	4.61	
	-1	kg	1 705	1 579	891	845	596	571	562	539	4.19	
	-2	kg	1 736	1 608	906	860			777	741	3.35	
Arm: 1 400mm + Dozer blade down	3	kg							786*	655	3.89	
	2	kg			893*	893*	827*	619	837*	546	4.33	
	1	kg			1 274*	908	958*	600	901*	512	4.46	
	0	kg	1 752*	1 611	1 540*	872	1 069*	522	982*	528	4.31	
	-1	kg	2 735*	1 618	1 563*	865			1 088*	614	3.85	
	-2	kg	2 098*	1 657					1 240*	938	2.89	
Arm: 1 700mm + Dozer blade down	3	kg					673*	638	713*	583	4.22	
	2	kg			741*	741*	734*	624	761*	496	4.62	
	1	kg	2 169*	1 675	1 138*	908	884*	599	819*	466	4.74	
	0	kg	1 839*	1 586	1 461*	861	1 025*	577	891*	476	4.61	
	-1	kg	2 813*	1 579	1 565*	845	1 059*	571	987*	539	4.19	
	-2	kg	2 359*	1 608	1 356*	860			1 121*	741	3.35	



# Specifications



## DIMENSIONS

Description		Unit	EC35D	
Arm		mm	1 400	1 700
A	Maximum cutting height	mm	4 690	4 853
B	Maximum dump height	mm	3 347	3 514
C	Digging depth	mm	3 131	3 431
C*	Maximum digging depth	mm	3 388	3 678
D	Maximum vertical wall digging depth	mm	2 521	2 814
E	Maximum digging reach at ground level	mm	5 031	5 320
F	Maximum digging reach	mm	5 153	5 434
G	Highest position dozer blade	mm		370
H	Lowest position dozer blade	mm		525
I	Tumbler length	mm		1 604
J	Track length	mm		2 055
K	Dozer blade, maximum reach at ground level	mm		1 648
L	Overall width with 300mm rubber tracks	mm		1 780
M	Overall length	mm	4 620	4 475
M*	Transport length	mm	5 275	5 190
N	Overall height of engine hood	mm		1 573
O	Minimum ground clearance	mm		285
P	Dozer blade height	mm		368
Q	Shoe width (rubber)	mm		300
R	Ground clearance to superstructure	mm		557
S	Front slew radius	mm	2 079	2 094
T	Front slew radius with maximum offset	mm	1 660	1 680
U	Overall height	mm		2 481
W	Overall width of superstructure	mm		1 575
X	Tail slew radius	mm		1 265
X'	Additional counterweight overhang	mm		85
Y	Angle of approach	°		25
Z	Dozer blade width	mm		1 780
$\alpha_1$	Maximum boom swing angle to the left	°		76
$\beta_1$	Maximum boom offset to the right	mm		627
$\alpha_2$	Maximum boom swing angle to the right	°		56
$\beta_2$	Maximum boom offset to the left	mm		472

!: Option

# Equipment

STANDARD EQUIPMENT
<b>Engine</b>
Low emission, direct injection, water-cooled, Volvo 3-cylinder diesel engine, meeting EU Stage V environmental regulations.
Engine restart prevention system. Starter motor is protected against ignition when engine is already running.
Dry-type single element air filter.
Plastic fuel tank with drain plug.
Protective strainer on the fuel suction pipe inside the tank
Water separator.
Translucent fuel filter.
<b>Drivetrain</b>
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.
<b>Electric / Electronic control system</b>
Maintenance free battery.
IP67 protected electrical system and high quality connectors.
Removable battery cut-off switch.
In-cab 12V power socket.
<b>Swing system</b>
Radial piston hydraulic motor with direct engagement on the ball internal crown wheel (no reduction gears).
Integrated shockless valve.
Automatic multi-disc slew brake.
Centralized and remote lubrication of crown wheel & ball bearing.
<b>Undercarriage</b>
"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 Integrated lifting points.
Sturdy removeable protecting covers for track motors and slew system.
400HB weld-on edge on dozer blade
<b>Hydraulic system</b>
Large hinged and key-locked access panel.
Variable displacement, load-sensing piston pump.
Closed centre flow-sharing main control valve.
Cushoning on cylinders:
- Boom up
- Arm out
Patented filtering and filling element.
Single layer cooling system.
Double-acting hydraulic circuit for accessories.
Hammer / shear valve.
Plastic tank with drain plug.
<b>Canopy</b>
FOPS level 1 on top (Falling Objects Protective Structure)
TOPS (Tip-Over Protective Structure)
ROPS (Roll-Over Protective Structure)
Cushioned operator station
Large and roomy uncluttered floor
Left hand-rail access
Seat-belt with warning indicator
<b>Cab</b>
FOPS on top level 1 (Falling Object Protective Structure).
TOPS (Tip-Over Protective Structure).
ROPS (Roll-Over Protective Structure).
Cushioned operator station.
Large door access.
Large and roomy uncluttered floor.
Gas-strutt 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.
Heating systems.
Multiple adjustable air vents.
Filtered air inlet.
Cab inside light.
Seat-belt with warning indicator.
Two working lights on top front of the cab.
<b>Digging equipment</b>
Monobloc box welded boom.
Boom cylinder rod protection.
Integrated lifting point on the boom.
Monobloc box welded arm.
Long-life steel bushings.
Hardened, pre-lubricated and corrosion resistant pins.
50 hours greasing intervals.

STANDARD EQUIPMENT
<b>Machine controls</b>
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.
Engine starting safety device: the left console must be raised to operate the starter.
Pressure accumulator to lower the equipment on the ground when the engine is switched off.
High torque / automatic two speed change over button on the keypad.
High speed toggle switch on the dozer blade lever.
Large travel pedals.
<b>Instrumentation and monitoring</b>
Water temperature and fuel level gauges.
Warning lights for hydraulic filter and air filter restriction.
Self-acting emergency engine shutdown. Prevents failures in case of coolant overheating or too low engine oil pressure.
Several warning lights, coupled to an audible signal, in the event of malfunction (overheating, drop in oil pressure, low battery voltage...)
<b>Official approval</b>
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.

EQUIPMENT	Basic	Standard
• = Standard		
○ = Option		
<b>Operator environment</b>		
Canopy	○	○
Cab with heater	○	○
Cab with heater and air conditioning		○
Vinyl or textile seat, with mechanical suspension, low-back seat and 2" seat belt	○	○
Vinyl or textile seat, height adjustable, with mechanical suspension, high back and 2" or 3" retractable seat belt	○	○
Storage box	○	○
Cab roof		○
ISO / SAE control pattern change (in-cab electric switch)	○	○
Travel alarm	○	○
Radio preparation (cab)	•	•
Radio, AUX, USB, Bluetooth		○
Anti-theft device	○	○
Digital hourmeter	•	•
Extra hour meter (mechanical, )	○	○
Cupholder.		○
<b>Machine exterior</b>		
Right rearview mirror	•	•
Left rearview mirror	○	○
Protected worklight on the boom	○	○
Rear worklight	○	○
Rotating beacon	○	○
Choice of halogen or LED lights and beacon	○	○
Additional counterweight	○	○
Front canopy guard (OPG1)	○	○
Severe-duty guards for cab or canopy (OPG2, front and top)	○	○
Several level of paint customisation (RAL specifications) to match with your corporate identity	○	○
<b>Digging equipment</b>		
Short arm	○	○
Short arm + thumb bracket	○	○
Long arm	○	○
Long arm + thumb bracket	○	○
<b>Undercarriage equipment</b>		
300mm rubber tracks	○	○
300mm steel tracks	○	○
Standard dozer blade	•	○
Hydraulic angle blade		○

## EQUIPMENT

- = Standard
- = Option

	Basic	Standard
<b>Hydraulic equipment</b>		
Proportional finger tip control for boom offset		•
On / Off finger tip control for boom offset	•	
Proportional finger tip control for accessories		•
On / off finger tip control for accessories	•	
Accessory flow adjustment with 3 function oriented button and user-defined settings.		•
Secondary relief valves for auxiliaries	•	•
Hydraulic drain for accessories		○
Breaker and clamshell auxiliaries		○
Second accessory circuit		○
Volvo Control System		○
Flat face hydraulic quick couplings	○	○
Single acting circuit for quick couplers	○	○
Double acting circuit for quick couplers	○	○
Boom and arm safety lifting valves with overload indicator	○	○
Boom, arm and dozer blade safety lifting valves with overload indicator	○	○
Float blade	•	•
Safety valve certification	○	○
Mineral hydraulic oil VG46	○	○
Bio hydraulic oil VG46 (PANOLIN®)	○	○
Mineral hydraulic oil VG 68	○	○
Mineral hydraulic oil VG32	○	○
Bio hydraulic oil VG32 (PANOLIN®)	○	○

## EQUIPMENT

- = Standard
- = Option

	Basic	Standard
<b>Engine</b>		
Manual engine control	•	
Digital engine control with two preset engine speed buttons (user adjustable)		•
Engine auto idling with time adjustment		○
ECO mode		•
Engine auto shut-down with time adjustment		○
Dual stage air filter	○	○
<b>Service and maintenance</b>		
In-cab air filter clogg warning lamp	•	•
In-cab engine overheating warning indicator	•	•
Tool kit	○	○
Electronic service reminder		•
V-CADS pro		•
<b>Telematics</b>		
CareTrack		○
<b>Attachments</b>		
Volvo quick coupler mechanical (pin-on)	○	○
Volvo hydraulic quick coupler (pin-on)	○	○
Extra pin kit	○	○
Lehnhoff® Quick Coupler Mechanical (MS03)	○	○
Lehnhoff® Quick Coupler Hydraulic (HS03)	○	○
S-type hydraulic quick coupler (S40)	○	○
Steelwrist® Tiltrotators (X04)		○
Thumb with short clamp (for direct fit bucket)	○	○
Thumb with long clamp (when using quick coupler)	○	○
A choice of fix or tiltable buckets (300mm / 52L up to 1300mm / 150L)	○	○
Bolt-on side cutters	○	○
Hydraulic breaker HB03LN	○	○

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

### Anti theft



### Auto engine shutdown



### Additional auxiliary piping



### OPG



### Air conditioning



### Angle blade



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.

**VOLVO**

**Volvo Construction Equipment**

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