

Volvo ECR25D in detail

Engine			
Engine		D1.1A	
Max. power at	r/min	2 400	
Gross	kW	15.6	
	hp	21.2	
According to ISO 9249 / SAE J1995			
Max. torque	Nm	71.4	
at engine speed	r/min	1 600	
No. of cylinders		3	
Displacement	cm ³	1.12	
Bore	mm	78	
Stroke	mm	78.4	
Compression ratio		24	
Electrical system			
Voltage	V	12	
Battery	V	1 x 12	
Battery capacity	Ah	70	
Alternator	V/Ah	12/40	
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 (option)	l/min	23	
Maximum operating pressure	MPa	25	
Digging Performances			
Standard bucket width (blade, W/O side cutter)	mm	500	
Standard bucket mass	kg	59	
Standard bucket rated capacity	l	74	
Bucket rotation	°	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	
Swing system			
Max. slew speed	r/min	9.4	
Max. slew torque	daNm	485	

Undercarriage			
Rubber track width	mm	250	
Steel 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	
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	°	30	
Service Refill			
Fuel tank	l	28	
Hydraulic system, total	l	33	
Hydraulic tank	l	23	
Engine oil	l	5.1	
Engine coolant	l	4	
Travel reduction unit	l	2 x 0.6	
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	
Weight and Ground Pressure			
Operating weight according to ISO 6016	kg	2 490	
Ground pressure (cab)	kPa	30.5	
Ground pressure (canopy)	kPa	29.4	
Transport weight	kg	2 412	
With heated cab			
With direct-fit bucket			
With rubber tracks	mm	250	
With short arm	mm	1 050	
With fuel tank capacity	%	100	
With canopy	-kg	90	
With extra counterweight	+kg	100	
With long arm and additional counterweight	+kg	112	
With steel tracks	+kg	163	
Steel tracks	mm	300	
With rubber tracks	+kg	78	
Rubber tracks	mm	300	

LIFTING CAPACITY ECR25D

These capacities are given for a machine equipped with a cabin, 250 mm rubber tracks and without a bucket or quick-coupler.

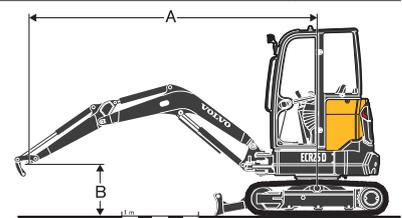
The below values are in compliance with ISO standard 10567.

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.

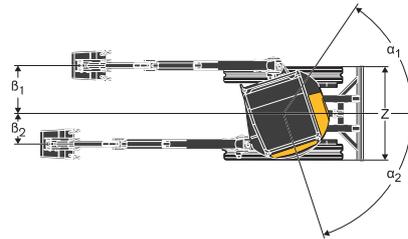
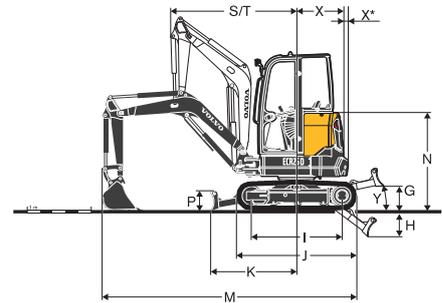
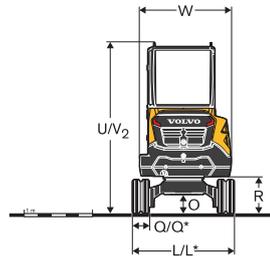
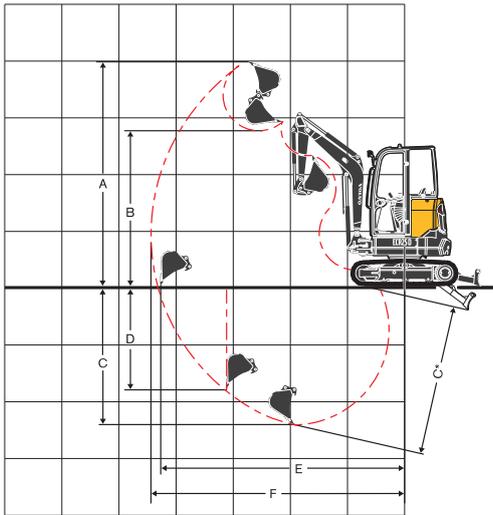
Caution: In accordance with EN 474-5, the machine must be equipped to carry out handling operations.

It is the operator's obligation to know and follow the applicable national and local safety regulations.



	Lifting point height (B) m	kg	Lifting point radius (A)									
			2.0 m			3.0 m			Max. reach			Max. m
			Along undercarriage, dozer blade up	Along undercarriage, dozer blade down	Across undercarriage	Along undercarriage, dozer blade up	Along undercarriage, dozer blade down	Across undercarriage	Along undercarriage, dozer blade up	Along undercarriage, dozer blade down	Across undercarriage	
Arm: 1 050 mm	3	kg	-	-	-	436	566*	418	424	577*	406	3.048
Counterweight: standard	2	kg	-	-	-	430	599*	412	310	601*	298	3.667
	1	kg	-	-	-	406	795*	389	280	642*	269	3.858
	0	kg	712	1 602*	670	390	933*	373	291	699*	280	3.706
Counterweight: + 100 kg additional	-1	kg	722	1 543*	680	393	849*	375	369	771*	354	3.144
	3	kg	-	-	-	474	566*	452	461	577*	439	3.048
	2	kg	-	-	-	467	599*	445	339	601*	324	3.667
Counterweight: + 100 kg additional	1	kg	-	-	-	443	795*	422	307	642*	293	3.858
	0	kg	778	1 602*	729	427	933*	406	320	699*	305	3.706
	-1	kg	789	1 543*	739	430	849*	409	404	771*	385	3.144
Arm: 1 350 mm	2	kg	-	-	-	465	500*	445	294	532*	282	3.971
	1	kg	808	1 334*	760	439	715*	418	269	571*	258	4.142
	0	kg	760	1 608*	713	417	897*	397	278	623*	266	4.002
Counterweight: + 100 kg additional	-1	kg	763	1 659*	716	413	902*	393	335	692*	320	3.502

Specifications



DIMENSIONS

Description	Unit	ECR25D	
		1050	1350
Arm	mm		
A	Maximum cutting height	4 010	4 183
B	Maximum dump height	2 784	2 957
B*	Maximum bucket clearance	2 897	3 070
C	Digging depth	2 461	2 761
C*	Maximum digging depth	2 672	2 965
D	Maximum vertical wall digging depth	1 832	2 119
E	Maximum digging reach at ground level	4 313	4 602
F	Maximum digging reach	4 484	4 768
G	Highest position dozer blade		401
H	Lowest position dozer blade		422
I	Tumbler length		1 440
J	Track length		1 906
K	Dozer blade, maximum reach at ground level		1 365
L	Overall width with 250mm (9.8") rubber tracks		1 500
L1	Overall width with 300mm (11.8") rubber tracks		1 550
M	Overall length	4 008	3 876
M*	Transport length	4 595	4 525
N	Overall height of engine hood		1 570
O	Minimum ground clearance		290
P	Dozer blade height		312
Q	Shoe width (rubber)		250
Q1			300
R	Ground clearance to superstructure		554
S	Front slew radius		2 002
T	Front slew radius with maximum offset		1 555
U	Overall height cab		2 535
U*	Overall height canopy		2 505
W	Overall width of superstructure		1 340
X	Tail slew radius	750	825
X1	Additional counterweight overhang	75	(incl.)
Y	Angle of approach		34
Z	Dozer blade width		1 550
α_1	Maximum boom swing angle to the left		72
β_1	Maximum boom offset to the right		784
α_2	Maximum boom swing angle to the right		56
β_2	Maximum boom offset to the left		496

1: Option

Equipment

STANDARD EQUIPMENT

Engine

Low emission, water-cooled, Volvo 3-cylinder diesel engine, meeting EPA Tier 4 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.

Drivetrain

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 battery.

IP67 protected electrical system and high quality connectors.

Protected battery cut-off switch.

In-cab 12V power socket.

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

"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.

Cushoning on cylinders:

Boom up

Large tiltable oil cooler.

Patented filtering and filling element.

Double-acting hydraulic circuit for accessories.

Canopy

Certified FOPS level 1 on top (Falling Objects Protective Structure).

Certified TOPS (Tip-Over Protective Structure).

Certified ROPS (Roll-Over Protective Structure).

Cushioned operator station.

Large and roomy uncluttered floor.

Left hand-rail access.

Seat-belt with warning indicator.

Right rear-view mirror.

One working light on the top front.

Toolbox with integrated storage for operator's manual and lockable door.

Phone holder.

STANDARD EQUIPMENT

Cab

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.

Seat-belt with warning indicator.

Right rear-view mirror.

Two working lights on top front.

Cup holder.

Phone holder.

Provision for a radio (antenna 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.

Machine controls

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 switch on the dashboard.

High speed toggle switch on the dozer blade lever.

Large travel pedals.

Instrumentation and monitoring

Permanent digital hour meter.

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...)

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.

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).