

Volvo ECR50D in detail.

Engine

Engine EU Stage 3A	Volvo	D2.6A
Rated speed	r/s / r/min	36.6 / 2 200
Maximum Gross power, ISO 3046-1	kW / hp	31.2 / 41.8
Max torque at	Nm / r/min	155 / 1 300
Nb of cylinders		4
Displacement	l	2.615
Bore	mm	87
Stroke	mm	110
Compression ratio		19

Electrical system

Rated voltage	V	12
Battery capacity	Ah	74
Alternator	V / A	12 / 70

Hydraulic system

Maximum system flow	l/min	103
Maximum flow for accessories	l/min	75
Maximum pressure for accessories	MPa/bar	22 / 220
Maximum flow for 2nd accessory circuit (option)	l/min	23
Maximum operating pressure	MPa/bar	26 / 260

Digging performances

Standard bucket width (blade, W/O side cutter)	mm	600
Standard bucket mass	kg	113
Standard bucket rated capacity	m³	0.144
Bucket rotation	deg	200
Bucket ISO breakout force	daN	3 612
Short arm (1400mm) ISO tearout force	daN	2 593
Long arm (1800mm) ISO tearout force	daN	2 177

Swing system

Max, slew speed	r/min	9.5
Max, slew torque	daN.m	1 400

Undercarriage

Rubber track width	mm	400
Bottom / Top rollers per side		5 / 1
Track tension		by grease piston
Blade (width x height)	mm	1 920 x 351

Drive

Max, drawbar pull	daN	3 450
Max. travel speed (low / high)	km/h	3.0 / 4.9
Gradeability	deg	30

Service refill capacities

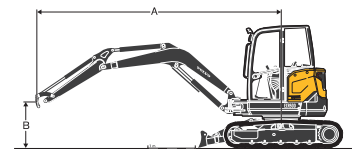
Fuel tank	l	64.5
Hydraulic system, total	l	62
Hydraulic tank	l	32
Engine oil	l	10.2
Engine coolant	l	9.8
Travel reduction unit	l	2 X 1

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 +A1:2009 (LwA)	dB(A)	96

Weight and ground pressure

Operating weight according to ISO 6016 (according to most usual configuration and including 75kg operator)	kg	5 010
Ground pressure	kg/cm² (kPa)	0.29 (28.4)
Transport weight (Heated cab, 380mm rubber tracks, short arm, 600mm direct-fit bucket, full fuel tank)	kg	4 935
With thumb	kg	+65
With extra counterweight	kg	+170
With long arm and additional counterweight	kg	+195
With 380mm steel tracks	kg	+100



LIFTING CAPACITY ECR50D

These capacities are given for a machine equipped with a cabin, 400mm 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.

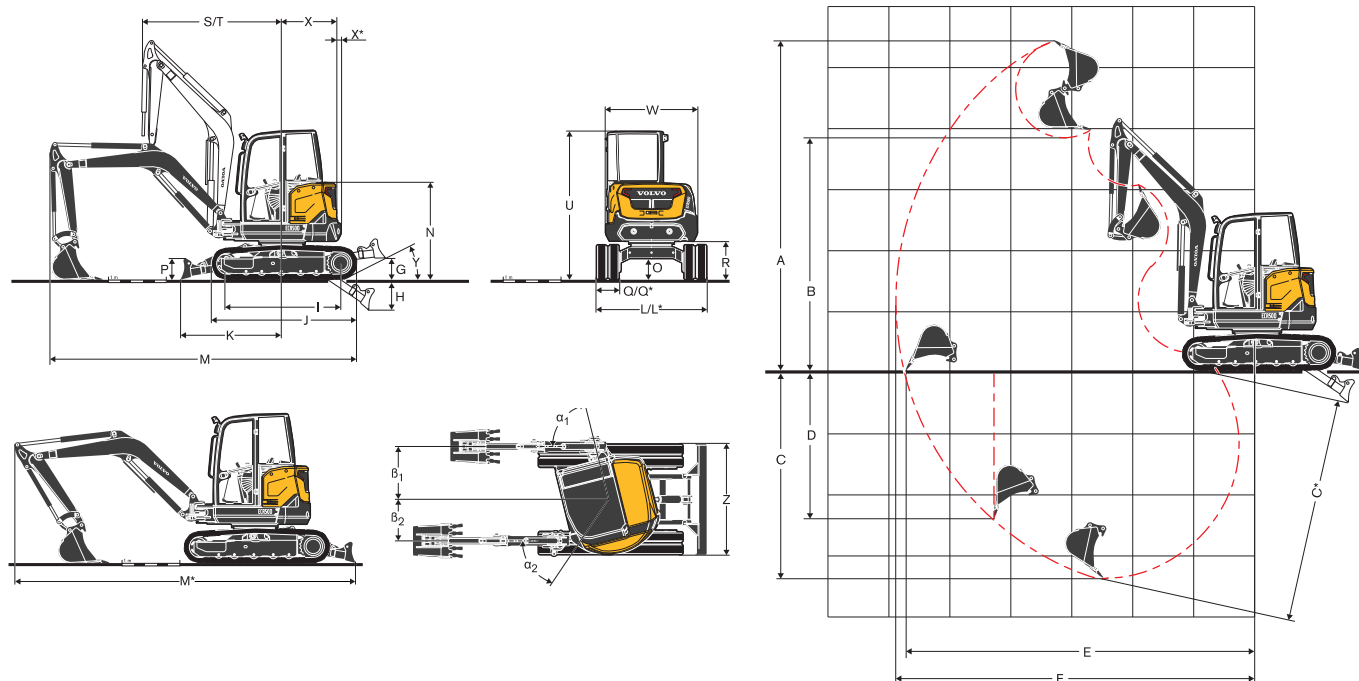
It is the operator's obligation to know and follow the applicable national and local safety regulations.

	Lifting point height (B) m		2.0 m		3.0 m		4.0 m		Max. reach		Max. m
Arm: 1 400mm + Dozer blade up	3	kg					892	770	700	605	4.65
	2	kg			1 332	1 129	866	745	615	531	5.01
	1	kg			1 250	1 052	833	713	589	508	5.09
	0	kg			1 217	1 021	811	692	610	597	4.93
	-1	kg	2 404	1 922	1 217	1 021	808	689	696	597	4.48
	-2	kg	2 449	1 962	1 244	1 046			961	819	3.6
Arm: 1 800mm + Additional counterweight + Dozer blade up	3	kg					877*	839	764	672	5.07
	2	kg			1 318	1 241	1 076	810	689	512	5.39
	1	kg			1 569	1 150	1 041	772	572	589	5.48
	0	kg	968*	968*	1 514	1 098	1 011	744	684	504	5.33
	-1	kg	2 030*	2 030*	1 502	1 087	999	733	760	560	4.92
	-2	kg	2 977	2 067	1 519	1 102	1 012	745	962	710	4.16
Arm: 1 400mm Dozer blade down	3	kg					1 048*	770	1 077*	605	4.65
	2	kg			1 634*	1 129	1 227*	745	1 100*	531	5.01
	1	kg			2 253*	1 052	1 456*	713	1 139*	508	5.09
	0	kg			2 450*	1 021	1 589*	692	1 189*	597	4.93
	-1	kg	2 460*	1 922	2 293*	1 021	1 522*	689	1 238*	597	4.48
	-2	kg	2 841*	1 962	1 727*	1 046			1 241*	819	3.6
Arm: 1 800mm + Additional counterweight + Dozer blade down	3	kg					877*	839	863*	672	5.07
	2	kg			1 318*	1 241	1 076*	810	866*	512	5.39
	1	kg			2 014*	1 150	1 339*	772	908*	589	5.48
	0	kg	968*	968*	2 385*	1 098	1 533*	744	1 014*	504	5.33
	-1	kg	2 030*	2 030*	2 375*	1 087	1 559*	733	1 115*	560	4.92
	-2	kg	3 560*	2 067	2 011*	1 102	1 279*	745	1 161*	710	4.16

*hydraulic limit

Specifications.

DIMENSIONS ECR50D



Description		Unit	Arm 1 400 mm	Arm 1 800 mm
A	Maximum cutting height	mm	5 400	5 656
B	Maximum dump height	mm	3 809	4 070
C	Digging depth	mm	3 400	3 800
C*	Maximum digging depth	mm	3 659	4 048
D	Maximum vertical wall digging depth	mm	2 417	2 791
E	Maximum digging reach at ground level	mm	5 771	6 161
F	Maximum digging reach	mm	5 908	6 288
G	Highest position dozer blade	mm	441	
H	Lowest position dozer blade	mm	580	
I	Tumbler length	mm	1 955	
J	Track length	mm	2 507	
K	Dozer blade, maximum reach at ground level	mm	1 748	
L	Overall width with 400mm rubber tracks	mm	1 920	
L*	Overall width with 380mm steel tracks	mm	1 900	
M	Overall length	mm	5 266	5 090
M*	Transport length	mm	5 992	5 883
N	Overall height of engine hood	mm	1 678	
O	Minimum ground clearance	mm	360	
P	Dozer blade height	mm	367	
Q	Shoe width (rubber)	mm	400	
Q*	Shoe width (steel)	mm	380	
R	Ground clearance to superstructure	mm	666	
S	Front slew radius	mm	2 450	2 495
T	Front slew radius with maximum offset	mm	1 948	1 984
U	Overall height	mm	2 570	
W	Overall width of superstructure	mm	1 603	
X	Tail slew radius	mm	960	1 033
X*	Additional counterweight overhang	mm	73	(incl.)
Y	Angle of approach	deg	30	
Z	Dozer blade width	mm	1 920	
α_1	Maximum boom swing angle to the left	deg	76	
β_1	Maximum boom offset to the right	mm	922	
α_2	Maximum boom swing angle to the right	deg	56	
β_2	Maximum boom offset to the left	mm	726	