

Volvo ECR50F in detail

Engine

Engine		D2.4H
Max. power at	r/min	2 200
Gross	kW	31.2
	hp	42
According to ISO 3046-1 and SAE J1995		
Max. torque	Nm	160
at engine speed	r/min	1 500
No. of cylinders		4
Displacement	cm ³	2 434
Bore	mm	87
Stroke	mm	102.4
Compression ratio		18:1

Electrical system

Voltage	V	12
Battery	V	1 X 12
Battery capacity	Ah	74
Alternator	V/Ah	12 / 70

Swing system

Max. slew speed	r/min	8.5
Max. slew torque	daNm	1 379

Undercarriage

Rubber track width	mm	400
Steel track width	mm	380
Bottom/top rollers per side		5 / 1
Track tension		by grease piston
Blade (width x height)	mm	2 000 x 361

Digging Performances

Standard bucket width (blade, W/O side cutter)	mm	600
Standard bucket mass	kg	113
Standard bucket rated capacity	l	144
Bucket rotation	°	199
Bucket breakout force (ISO)	daN	3 618
Short arm tearout force (ISO)	daN	2 595
With short arm	mm	1 400
Long arm tearout force (ISO)	daN	2 178
With long arm	mm	1 800

Weight and Ground Pressure

Operating weight according to ISO 6016	kg	5 050
Ground pressure (cab)	kPa	28.4
Ground pressure (canopy)	kPa	27.7
Transport weight	kg	4 975
With rubber tracks	mm	400
With short arm	mm	1 400
With fuel tank capacity	%	100
With canopy	-kg	110
With extra counterweight	+kg	170
With long arm	mm	1 800
With long arm and additional counterweight	+kg	197
With steel tracks	+kg	120
Steel tracks	mm	380
With rubber pads	+kg	160
Rubber pads	mm	400

Hydraulic system

Pump type		Variable displacement, load-sensing piston pump.
Maximum system flow	l/min	120
Maximum operating pressure (main pump)	MPa	26
Maximum flow for accessories	l/min	75
Maximum pressure for accessories	MPa	22
Maximum flow for 2nd accessory circuit	l/min	40

Travel System

Max. drawbar pull	daN	3 830
Max. travel speed low	km/h	2.7
Max. travel speed high	km/h	4.4
Gradeability	°	20

Service Refill

Fuel tank	l	70
Hydraulic system, total	l	70
Hydraulic tank	l	49
Engine oil	l	8.4
Engine coolant	l	9
Travel reduction unit	l	2 X 0.8

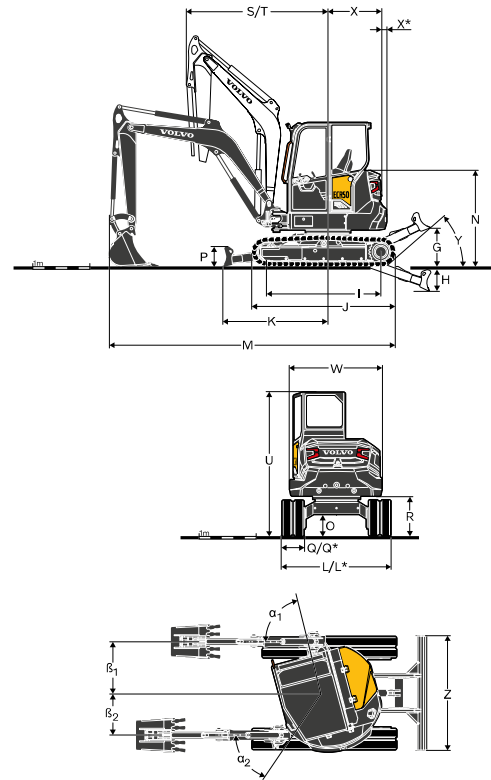
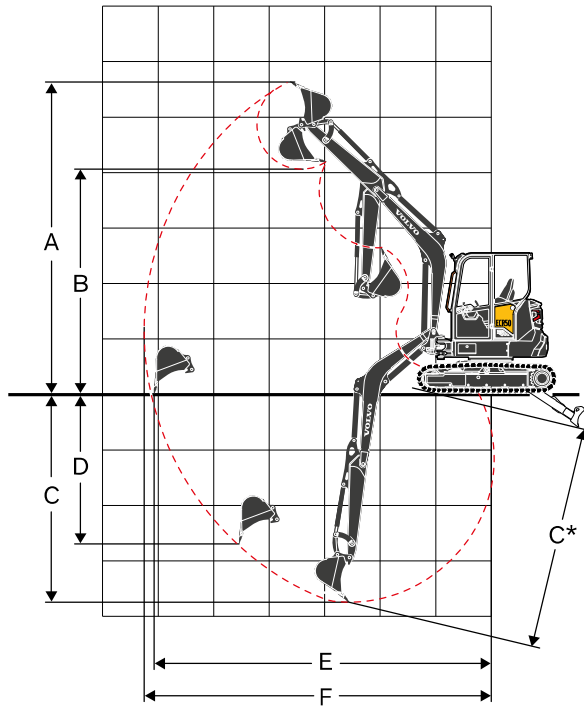
Sound Level

Interior sound level according to ISO 6396		
L _{pA}	dB	78
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:200		
L _{WA}	dB	96

Cab

Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO₂-eq.

Specifications



DIMENSIONS

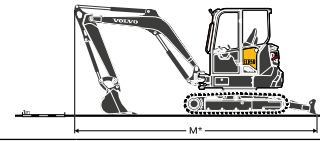
Description		Unit	ECR50F	
Arm		mm	1 400	1 800
A	Maximum cutting height	mm	5 369	5 634
B	Maximum dump height	mm	3 787	4 052
C	Digging depth	mm	3 374	3 768
C*	Maximum digging depth	mm	3 716	4 144
D	Maximum vertical wall digging depth	mm	2 335	2 700
E	Maximum digging reach at ground level	mm	5 748	6 137
F	Maximum digging reach	mm	5 879	6 260
G	Highest position dozer blade	mm		441
H	Lowest position dozer blade	mm		610
I	Tumbler length	mm		2 000
J	Track length	mm		2 521
K	Dozer blade, maximum reach at ground level	mm		1 860
L	Overall width with 400mm rubber tracks	mm		2 000
M	Overall length	mm	5 198	5 018
M*	Transport length	mm	6 075	5 950
N	Overall height of engine hood	mm		1 700
O	Minimum ground clearance	mm		359
P	Dozer blade height	mm		361
Q	Shoe width (rubber)	mm		400
R	Ground clearance to superstructure	mm		645
S	Front slew radius	mm	2 428	2 479
T	Front slew radius with maximum offset	mm	1 951	1 995
U	Overall height	mm		2 540
W	Overall width of superstructure	mm		1 708
X	Tail slew radius	mm	951	1 032
X ¹	Additional counterweight overhang	mm	80	incl.
Y	Angle of approach	°		31
Z	Dozer blade width	mm		2 000
α ₁	Maximum boom swing angle to the left	°		75
β ₁	Maximum boom offset to the right	mm		891
α ₂	Maximum boom swing angle to the right	°		55
β ₂	Maximum boom offset to the left	mm		690

¹: Option

Specifications

LIFTING CAPACITY ECR50F

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	Lifting capacity kg	Lifting point radius (A)										
			2.0 m		3.0 m		4.0 m		5.0 m		Max. reach		Max. m
			Along under-carriage	Across under-carriage	Along under-carriage	Across under-carriage	Along under-carriage	Across under-carriage	Along under-carriage	Across under-carriage	Along under-carriage	Across under-carriage	
Arm: 1400mm + Dozer blade up	3	kg					1 050*	817			904	647	4,58
	2	kg			1 583*	1 207	1 114	791			792	565	4,94
	1	kg			1 665	1 126	1 078	758	777	554	759	539	5,04
	0	kg			1 626	1 092	1 054	737			787	557	4,88
	-1	kg	2 567	2 083	1 626	1 092	1 052	734			900	634	4,44
	-2	kg	2 786	2 128	1 658	1 120					1 252*	873	3,56
Arm: 1800mm + 170kg Additional counterweight + Dozer blade up	3	kg					880*	880*	855*	621	847*	612	5,00
	2	kg			1 282*	1 282*	1 063*	861	852	613	760	545	5,33
	1	kg			1 805	1 230	1 161	821	834	597	731	523	5,42
	0	kg	1 064*	1 064*	1 741	1 173	1 128	791	820	584	752	535	5,28
	-1	kg	2 134*	2 134*	1 726	1 160	1 115	779			838	595	4,88
	-2	kg	3 432	2 239	1 746	1 178	1 132	795			1 070	753	4,13
Arm: 1400mm + Dozer blade down	3	kg					1 050*	817			1 081*	647	4,58
	2	kg			1 583*	1 207	1 213*	791			1 104*	565	4,94
	1	kg			2 171*	1 126	1 431*	758	1 150*	554	1 143*	539	5,04
	0	kg			2 383*	1 092	1 562*	737			1 193*	557	4,88
	-1	kg	2 567*	2 083	2 248*	1 092	1 498*	734			1 243*	634	4,44
	-2	kg	2 786*	2 128	1 708*	1 120					1 252*	873	3,56
Arm: 1800mm + 170kg Additional counterweight + Dozer blade down	3	kg					880*	880*	855*	621	847*	612	5,00
	2	kg			1 282*	1 282*	1 063*	861	979*	613	838*	545	5,33
	1	kg			1 934*	1 230	1 313*	821	1 072*	597	882*	523	5,42
	0	kg	1 064*	1 064*	2 305*	1 173	1 501*	791	1 139*	584	982*	535	5,28
	-1	kg	2 134*	2 134*	2 312*	1 160	1 530*	779			1 116*	595	4,88
	-2	kg	3 432*	2 239	1 972*	1 178	1 255*	795			1 155*	753	4,13