

Volvo EC15D, EC18D, EC20D in detail

Engine				
		EC15D	EC18D	EC20D
Engine		D0.9A	D0.9A	D0.9A
Max. power at	r/min	2 420	2 420	2 420
Gross (ISO 14396/SAE J1995)	kW	12	12	12
	hp	16.3	16.3	16.3
Max. torque	Nm	51	51	51
at engine speed	r/min	2 000	2 000	2 000
No. of cylinders		3	3	3
Displacement	cm ³	898	898	898
Bore	mm	72	72	72
Stroke	mm	73.6	73.6	73.6
Compression ratio		24	24	24
Electrical system				
		EC15D	EC18D	EC20D
Voltage	V	12	12	12
Battery	V	1 x 12	1 x 12	1 x 12
Battery capacity	Ah	64	64	64
Alternator	V/Ah	12/40	12/40	12/40
Swing system				
		EC15D	EC18D	EC20D
Max. slew speed	r/min	9.5	9.5	9.5
Max. slew torque	daNm	243	243	304
Undercarriage				
		EC15D	EC18D	EC20D
Bottom/top rollers per side		3 / 0	3 / 0	4 / 0
Track tension		By grease piston	By grease piston	By grease piston
Blade (width x height)	mm	980 x 238	1 336 x 248	1 356 x 248
Digging Performances				
		EC15D	EC18D	EC20D
Standard bucket width (blade, W/O side cutter)	mm	450	450	500
Standard bucket mass	kg	33	33	48
Standard bucket rated capacity	l	36	36	63
Bucket rotation	°	196	196	199
Bucket breakout force (ISO)	daN	1 510	1 510	1 827
Short arm tearout force (ISO)	daN	850	850	1 229
Long arm tearout force (ISO)	daN	750	750	1 033
Weight and Ground Pressure				
		EC15D	EC18D	EC20D
Operating weight according to ISO 6016	kg	1 640	1 770	1 950
Ground pressure (cab)	kPa	26.4	30.4	30.4
Transport weight	kg	1 565	1 695	1 875
With heated cab				
With direct-fit bucket				
With rubber tracks	mm	230	230	250
With short arm	mm	950	950	1 050
With fuel tank capacity	%	100	100	100
With canopy	-kg	78	78	78
With extra counterweight	+kg	38	38	
With long arm	+kg	4	4	4

Hydraulic system					
		EC15D	EC18D	EC20D	
Pump type		Gear pump	Gear pump / Piston pump	Piston pump	
Maximum system flow	l/min	34	34 / 48	48	
Maximum flow for accessories	l/min	30	30 / 43	43	
Maximum flow for 2nd accessory circuit (option)	l/min	-	19	19	
Maximum operating pressure	MPa	17	17	21	
Travel System					
		EC15D	EC18D	EC20D	
Max. drawbar pull	daN	1 160	1 160	1 440	
Max. travel speed low	km/h	1.9	1.9 / 2.5	2.5	
Max. travel speed high	km/h	1.9	3.7 / 4.7	4.7	
Gradeability	°	30	30	30	
Service Refill					
		EC15D	EC18D	EC20D	
Fuel tank	l	20	20	20	
Hydraulic system, total	l	21	21	21	
Hydraulic tank	l	15	15	15	
Engine oil	l	3.7	3.7	3.7	
Engine coolant	l	4	4	4	
Travel reduction unit	l	2 x 0.33	2 x 0.33	2 x 0.33	
Sound Level					
		EC15D	EC18D	EC20D	
Interior sound level according to ISO 6396					
LpA	dB(A)	78	78	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	93	93	
Attachments					
Type	EC15D, EC18D			EC20D	
	Width mm	Capacity l	Weight kg	Capacity l	Weight kg
General purpose buckets	200	14	21	-	-
	250	19	23	28	32
	300	23	26	32	34
	400	32	31	47	41
	450	36	33	-	-
	500	41	36	63	48
Fix-ditching buckets	600	51	41	78	53
	800	59	49	-	-
2 x 45° Tilttable ditching buckets	1 000	76	56	76	57
	850	59	83	59	83
EC15D, EC18D, EC20D					
	Operating weight		Tool Ø	Impact rate	
	kg		mm	bpm	
Hydraulic breaker HB02LN	129		57	450 - 1 000	

Specifications

LIFTING CAPACITY EC15D

These capacities are given for a machine equipped with heated cab, rubber tracks and without a bucket or quick-coupler. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit. Caution : In accordance with standard EN 474-5, the machine must be equipped with safety valves and an overload indicator (available as options) to carry out handling operations.

	Lifting point height		Lifting point radius						
			2.0 m		3.0 m		Max reach		Max.
Arm: 950mm + Dozer blade up	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	372	327	212	188	182	161	3.33 m
	0 m	kg	346	303	204	180	181	160	3.29 m
	-1 m	kg	347	303	-	-	223	197	2.82 m
Arm: 950mm + Dozer blade down	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	447*	327	292*	188	262*	161	3.33 m
	0 m	kg	542*	303	294*	180	246*	160	3.29 m
	-1 m	kg	422*	303	-	-	238*	197	2.82 m
Arm: 950mm + Dozer blade up + Additional counterweight	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	399	353	228	203	197	175	3.33 m
	0 m	kg	374	328	221	196	196	174	3.29 m
	-1 m	kg	375	329	-	-	238*	214	2.82 m
Arm: 950mm + Dozer blade down + Additional counterweight	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	447*	353	292*	203	262*	175	3.33 m
	0 m	kg	542*	328	294*	196	246*	174	3.29 m
	-1 m	kg	422*	329	-	-	238*	214	2.82 m
Arm: 1 150mm + Dozer blade up	2 m	kg	-	-	225	194	205	177	3.17 m
	1 m	kg	372*	332	218	188	173	148	3.52 m
	0 m	kg	357	302	209	179	171	147	3.48 m
	-1 m	kg	353	298	208	178	204	174	3.05 m
Arm: 1 150mm + Dozer blade down	2 m	kg	-	-	241*	194	248*	177	3.17 m
	1 m	kg	372*	332	275*	188	240*	148	3.52 m
	0 m	kg	547*	302	296*	179	228*	147	3.48 m
	-1 m	kg	451*	298	232*	178	221*	174	3.05 m
Arm: 1 150mm + Dozer blade up + Additional counterweight	2 m	kg	-	-	241*	210	221*	192	3.17 m
	1 m	kg	372*	357	235	204	187	161	3.52 m
	0 m	kg	384	327	226	194	185	160	3.48 m
	-1 m	kg	381	324	225	193	220	190	3.05 m
Arm: 1 150mm + Dozer blade down + Additional counterweight	2 m	kg	-	-	241*	210	248*	192	3.17 m
	1 m	kg	372*	357	275*	204	240*	161	3.52 m
	0 m	kg	547*	327	296*	194	228*	160	3.48 m
	-1 m	kg	451*	324	232*	193	221*	190	3.05 m

*hydraulic limit

Specifications

LIFTING CAPACITY EC18D

These capacities are given for a machine equipped with heated cab, rubber tracks and without a bucket or quick-coupler. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit. Caution : In accordance with standard EN 474-5, the machine must be equipped with safety valves and an overload indicator (available as options) to carry out handling operations.

	Lifting point height		Lifting point radius						Max.
			2.0 m		3.0 m		Max reach		
									
Arm: 950mm + Dozer blade up	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	396	447*	236	292*	195	262*	3.33 m
	0 m	kg	371	542*	218	294*	194	246*	3.29 m
	-1 m	kg	372	422*	-	-	238*	238*	2.82 m
Arm: 950mm + Dozer blade down	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	447*	447*	292*	292*	262*	262*	3.33 m
	0 m	kg	542*	542*	294*	294*	246*	246*	3.29 m
	-1 m	kg	422*	422*	-	-	238*	238*	2.82 m
Arm: 950mm + Dozer blade up + Additional counterweight	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	424	447*	243	292*	210	262*	3.33 m
	0 m	kg	399	542*	235	294*	209	246*	3.29 m
	-1 m	kg	400	422*	-	-	238*	238*	2.82 m
Arm: 950mm + Dozer blade down + Additional counterweight	2 m	kg	-	-	-	-	-	-	-
	1 m	kg	447*	447*	292*	292*	262*	262*	3.33 m
	0 m	kg	542*	542*	294*	294*	246*	246*	3.29 m
	-1 m	kg	422*	422*	-	-	238*	238*	2.82 m
Arm: 1 150mm + Dozer blade up	2 m	kg	-	-	233	241*	213	248*	3.17 m
	1 m	kg	372*	372*	226	275*	179	240*	3.52 m
	0 m	kg	370	547*	217	296*	178	228*	3.48 m
	-1 m	kg	366	451*	216	232*	212	221*	3.05 m
Arm: 1 150mm + Dozer blade down	2 m	kg	-	-	241*	241*	248*	248*	3.17 m
	1 m	kg	372*	372*	275*	275*	240*	240*	3.52 m
	0 m	kg	547*	547*	296*	296*	228*	228*	3.48 m
	-1 m	kg	451*	451*	232*	232*	221*	221*	3.05 m
Arm: 1 150mm + Dozer blade up + Additional counterweight	2 m	kg	-	-	241*	241*	229	248*	3.17 m
	1 m	kg	372*	372*	243	275*	193	240*	3.52 m
	0 m	kg	398	547*	234	296*	192	228*	3.48 m
	-1 m	kg	394	451*	232*	232*	221*	221*	3.05 m
Arm: 1 150mm + Dozer blade down + Additional counterweight	2 m	kg	-	-	241*	241*	248*	248*	3.1 m
	1 m	kg	372*	372*	275*	275*	240*	240*	3.52 m
	0 m	kg	547*	547*	296*	296*	228*	228*	3.48 m
	-1 m	kg	451*	451*	232*	232*	221*	221*	3.05 m

*hydraulic limit

LIFTING CAPACITY EC20D

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

The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

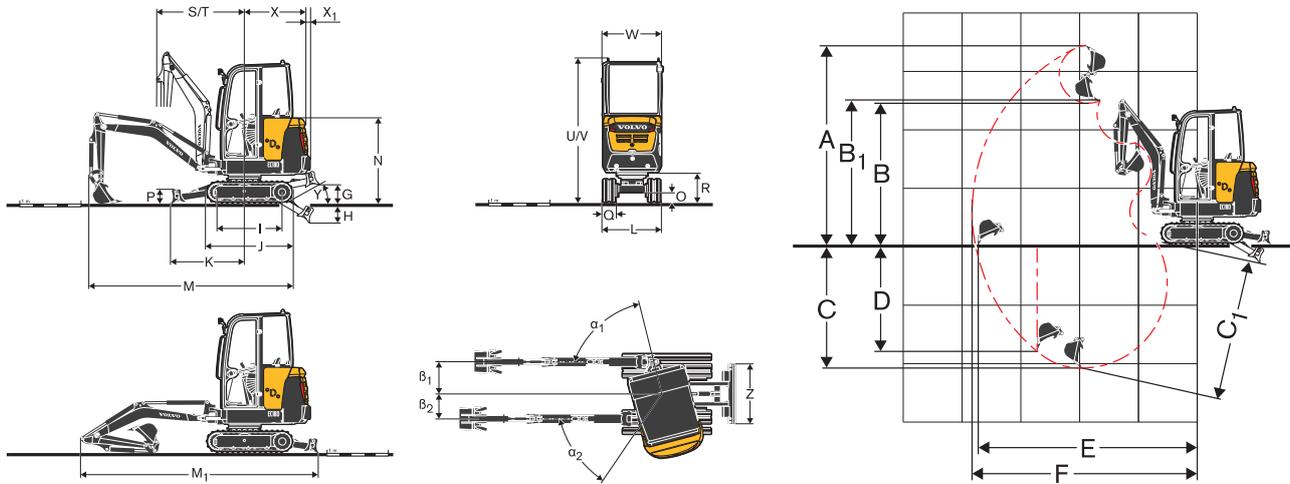
Caution : In accordance with standard EN 474-5, the machine must be equipped with safety valves and an overload indicator (available as options) to carry out handling operations.

	Lifting point height (B)		Lifting point radius (A)						Max.
			2.0 m		3.0 m		Max reach		
									
Arm: 1 050mm + Dozer blade up	2 m	kg	-	-	295	330	259	289	3.25 m
	1 m	kg	506	567	281	316	225	253	3.48 m
	0 m	kg	475	536	270	304	232	262	3.35 m
	-1 m	kg	479	540	-	-	302	340	2.79 m
Arm: 1 050mm + Dozer blade down	2 m	kg	-	-	399*	330	407*	289	3.25 m
	1 m	kg	776*	567	476*	316	431*	253	3.48 m
	0 m	kg	965*	536	542*	304	468*	262	3.35 m
	-1 m	kg	851*	540	-	-	514*	340	2.79 m
Arm: 1 350mm + Dozer blade up	2 m	kg	-	-	298	332	223	250	3.55 m
	1 m	kg	517	578	281	315	197	222	3.76 m
	0 m	kg	471	532	265	299	201	227	3.64 m
	-1 m	kg	466	527	262	297	247	279	3.15 m
Arm: 1 350mm + Dozer blade down	2 m	kg	-	-	334*	332	354*	250	3.55 m
	1 m	kg	648*	578	427*	315	379*	222	3.76 m
	0 m	kg	931*	532	520*	299	413*	227	3.64 m
	-1 m	kg	910*	527	503*	297	459*	279	3.15 m

*hydraulic limit

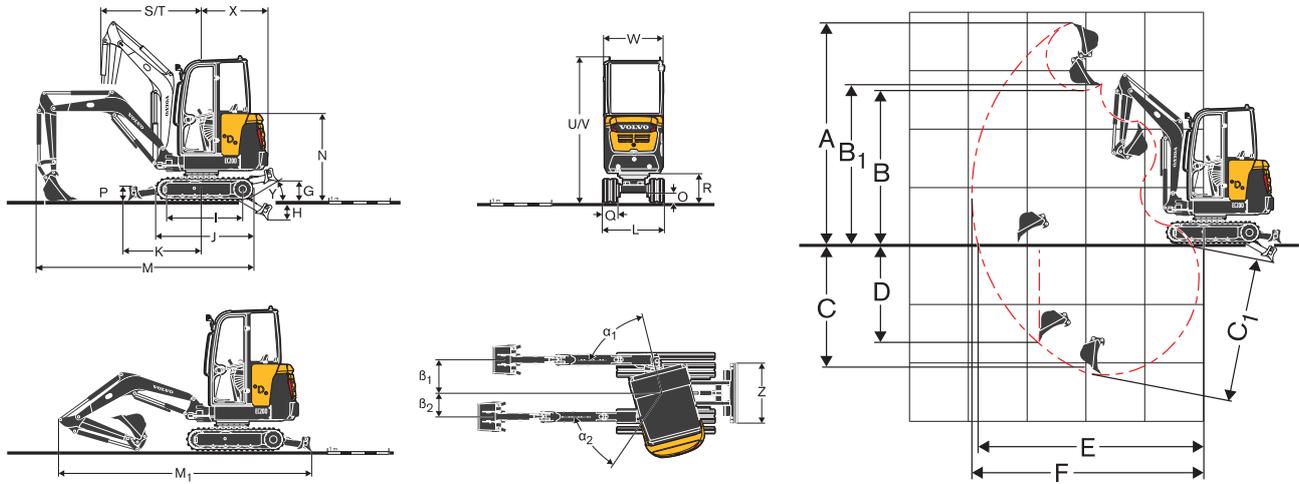
Specifications

DIMENSIONS EC15D - EC18D



Description		Unit	EC15D		EC18D	
Arm		mm	950	1 150	950	1 150
A	Maximum cutting height	mm	3 437	3 580	3 460	3 603
B	Maximum dumping height	mm	2 439	2 582	2 462	2 605
B ₁	Maximum bucket clearance	mm	2 475	2 620	2 498	2 642
C	Digging depth	mm	2 120	2 323	2 097	2 297
C ₁	Maximum digging depth	mm	2 354	2 565	2 387	2 387
D	Maximum vertical wall digging depth	mm	1 793	1 985	1 772	1 961
E	Maximum digging reach at ground level	mm	3 803	3 996	3 799	3 992
F	Maximum digging reach	mm	3 856	4 046	3 856	4 046
G	Highest position dozer blade	short blade mm	209		245	
		long blade mm	321		326	
H	Lowest position dozer blade	short blade mm	190		227	
		long blade mm	294		311	
I	Tumbler length	mm	1 082		1 082	
J	Track length	mm	1 462		1 462	
K	Dozer blade, maximum reach at ground level	short blade mm	857		976	
		long blade mm	1 166		1 215	
L	Overall track width	min mm	980		994	
		max mm	-		1 336	
M	Overall length	mm	3 580		3 591	
M ₁	Transport length	mm	3 770	3 780	3 770	3 780
N	Overall height of engine hood	mm	1 400		1 423	
O	Minimum ground clearance	mm	210		159	
P	Dozer blade height	short blade mm	238		238	
		long blade mm	241		248	
Q	Shoe width	mm	230		230	
R	Ground clearance to superstructure	mm	458		481	
S	Front slew radius	mm	1 452		1 452	
T	Front slew radius with maximum offset	mm	1 147		1 147	
U	Overall height (canopy)	mm	2 296		2 318	
V	Overall height (cab)	mm	2 371		2 395	
W	Overall width of superstructure	mm	993		993	
X	Tail slew radius	mm	1 052		1 052	
X ₁	Tail slew radius with additional counterweight	mm	38		38	
Y	Angle of approach	short blade deg	28		26	
		long blade deg	25		24	
Z	Dozer blade width	min mm	980		994	
		max mm	-		1 336	
α ₁	Maximum boom swing angle to the left	deg	75		75	
β ₁	Maximum boom offset to the right	mm	527		527	
α ₂	Maximum boom swing angle to the right	deg	55		55	
β ₂	Maximum boom offset to the left	mm	412		412	

DIMENSIONS EC20D



Description		Unit	EC20D	
Arm		mm	1 050	1 350
A	Maximum cutting height		3 807	3 982
B	Maximum dumping height	mm	2 635	2 810
B ₁	Maximum bucket clearance	mm	2 746	2 920
C	Digging depth	mm	2 257	2 557
C ₁	Maximum digging depth	mm	2 482	2 781
D	Maximum vertical wall digging depth	mm	1 692	1 978
E	Maximum digging reach at ground level	mm	3 971	4 261
F	Maximum digging reach	mm	4 080	4 362
G	Highest position dozer blade	mm		326
H	Lowest position dozer blade	mm		311
I	Tumbler length	mm		1 240
J	Track length	mm		1 620
K	Dozer blade, maximum reach at ground level	mm		1 215
L	Overall track width	min mm		1 014
		max mm		1 356
M	Overall length	mm		3 746
M ₁	Transport length	mm	2 850	2 880
N	Overall height of engine hood	mm		1 423
O	Minimum ground clearance	mm		159
P	Dozer blade height	mm		248
Q	Shoe width	mm		250
R	Ground clearance to superstructure	mm		481
S	Front slew radius	mm		1 683
T	Front slew radius with maximum offset	mm		1 383
U	Overall height (canopy)	mm		2 318
V	Overall height (cab)	mm		2 395
W	Overall width of superstructure	mm		993
X	Tail slew radius	mm		1 090
Y	Angle of approach	deg		28
Z	Dozer blade width	min mm		1 014
		max mm		1 356
α ₁	Maximum boom swing angle to the left	deg		75
β ₁	Maximum boom offset to the right	mm		547
α ₂	Maximum boom swing angle to the right	deg		55
β ₂	Maximum boom offset to the left	mm		392