Volvo EC220E in detail

Engine

The latest generation, Volvo engine Tier 4f / Stage IV emissions compliant diesel engine fully meets the demands of the latest, emsissions regulations. Featuring Volvo Advanced Combustion Technology (V-ACT), it is designed to deliver superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and air-to-air intercooler, and electronic engine controls to optimize machine performance.
Air Filter: 3-stage with precleaner
Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

Engine		Volvo		D6J
Max power at		r/s / r/min		30 / 1 800
Net, ISO 9249/SAE J1349		kW / hp		128 / 172
Gross, ISO 14396/SAE J1995		kW / hp		129 / 173
Max torque at	Nm / r/min	lbf ft / r/min	849 / 1 350	626 / 1,350
No. of cylinders				6
Displacement	l	cu.in	5.7	348
Bore	m	in	98	3.86
Stroke	m	in	126	4.96

Electrical system

Well protected high-capacity electrical system. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard.
Contronics provides advanced monitoring of machine functions and important diagnostic information.

Voltage		V	24
Batteries		V / Ah	2 x 12 / 140
Alternator		V / Ah	28 / 80
Start motor		V / kW	24 / 5.5

Swing system

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and antirebound valve are standard

Max. slew speed		r/min		11.1
Max. slew torque	kNm	lbf ft	83	61,220

Drive

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Max. drawbar pull	kN	lbf	183	41,150
Max. travel speed	km/h	mph	3.5 / 5.7	2.2 / 3.5
Gradeability		°		35

Undercarriage

Robust X-shaped frame with greased and sealed track chains as standard

Track shoe				2 x 49
Link pitch	mm	in	190	7.5
Shoe width, triple grouser	mm	in	500 / 600 / 700 / 800 / 900	20 / 24 / 28 / 32 / 36
Shoe width, triple grouser (HD)	mm	in	600	24
Shoe width, double grouser	mm	in	700	28
Bottom rollers				2 x 8
Top rollers				2 x 2

Service refill capacities

Fuel tank	l	gal	320	85
Hydraulic system, total	l	gal	290	77
Hydraulic tank	l	gal	140	37
DEF tank	l	gal	27	7
Engine oil	l	gal	25	7
Engine coolant	l	gal	35	9
Swing reduction unit	l	gal	6	2
Travel reduction unit	l	gal	2 x 5.8	2 x 2

Hydraulic system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.
The following important functions are included in the system:
Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.
Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.
Swing priority: Gives priority to swing functions for faster simultaneous operations.
Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.
Power boost: All digging and lifting forces are increased.
Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

Main pump				
Type	2 x variable displacement axial piston pumps			
Maximum flow	l/min	gpm	2 x 207	2 x 55
Pilot pump				
Type				Gear pump
Maximum flow	l/min	gpm	1 x 18	1 x 5
Relief valve setting				
Implement	Mpa	psi	34.3 / 36.3	4,980 / 5,260
Travel circuit	Mpa	psi	34.3	4,980
Slew circuit	Mpa	psi	27.9	4,050
Pilot circuit	Mpa	psi	3.9	570

Travel: Variable displacement axial piston motor with mechanical brake
Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic cylinders

Mono boom				2
Bore x Stroke	ø x mm	ø x in	125 x 1 235	4.9 x 48.6
2 piece boom				1
Bore x Stroke	ø x mm	ø x in	160 x 1 070	6.3 x 42.1
Arm				1
Bore x Stroke	ø x mm	ø x in	135 x 1 540	5.3 x 60.6
Bucket				1
Bore x Stroke	ø x mm	ø x in	120 x 1 065	4.7 x 41.9
Bucket for LR boom				1
Bore x Stroke	ø x mm	ø x in	100 x 865	3.9 x 34.1

Cab

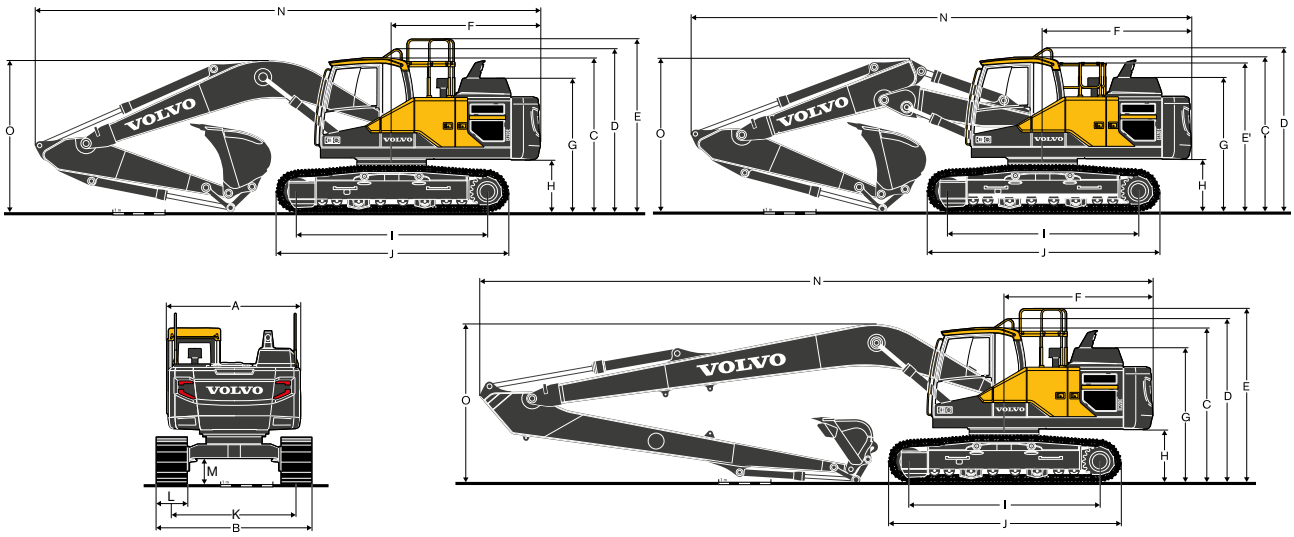
The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door.
Integrated air-conditioning and heating system: The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.
Ergonomic operator's seat: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

Sound Level

Sound level in cab according to ISO 6396		
LpA (standard)	dB(A)	69
LpA (tropical)	dB(A)	70
External sound level according to ISO 6395, EU Noise Directive (2000/14/EC)		
LwA (standard)	dB(A)	102
LwA (tropical)	dB(A)	103

Specifications

DIMENSIONS

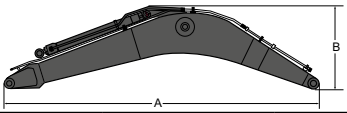


Description	Unit		EC220EL								EC220ELR	
Boom	m, ft in		5.7 (18'8") mono and 5.57 (18'3") 2-piece								8.85	29'0"
Arm	m	ft in	2.0	6'7"	2.5	8'2"	2.9	9'6"	3.5	11'6"	6.25	20'6"
A. Overall width of upper structure	mm	ft in	2 540	8'4"	2 540	8'4"	2 540	8'4"	2 540	8'4"	2 540	8'4"
B. Overall width	mm	ft in	2 990	9'10"	2 990	9'10"	2 990	9'10"	2 990	9'10"	3 190	10'6"
C. Overall height of cab	mm	ft in	2 955	9'8"	2 955	9'8"	2 955	9'8"	2 955	9'8"	2 955	9'8"
D. Overall height of handrail	mm	ft in	3 075	10'1"	3 075	10'1"	3 075	10'1"	3 075	10'1"	3 075	10'1"
E. Overall height of guardrail(unfolded)	mm	ft in	3 270	10'9"	3 270	10'9"	3 270	10'9"	3 270	10'9"	3 270	10'9"
E'. Overall height of guardrail(folded)	mm	ft in	2 790	9'2"	2 790	9'2"	2 790	9'2"	2 790	9'2"	2 790	9'2"
F. Tail swing radius	mm	ft in	2 850	9'4"	2 850	9'4"	2 850	9'4"	2 850	9'4"	2 850	9'4"
G. Overall height of engine hood	mm	ft in	2 600	8'6"	2 600	8'6"	2 600	8'6"	2 600	8'6"	2 600	8'6"
H. Counterweight clearance *	mm	ft in	1 025	3'4"	1 025	3'4"	1 025	3'4"	1 025	3'4"	1 025	3'4"
I. Tumbler length	mm	ft in	3 660	12'0"	3 660	12'0"	3 660	12'0"	3 660	12'0"	3 660	12'0"
J. Track length	mm	ft in	4 460	14'8"	4 460	14'8"	4 460	14'8"	4 460	14'8"	4 460	14'8"
K. Track gauge	mm	ft in	2 390	7'10"	2 390	7'10"	2 390	7'10"	2 390	7'10"	2 390	7'10"
L. Shoe width	mm	ft in	600	2'0"	600	2'0"	600	2'0"	600	2'0"	800	2'7"
M. Min. ground clearance *	mm	ft in	460	1'6"	460	1'6"	460	1'6"	460	1'6"	460	1'6"
N. Overall length	mm	ft in	9 795	32'2"	9 745	32'0"	9 690	31'9"	9 720	31'11"	12 880	42'3"
N[1]. Overall length	mm	ft in	9 660	31'8"	9 610	31'6"	9 570	31'5"	9 560	31'4"	-	-
O. Overall height of boom	mm	ft in	3 100	10'2"	3 080	10'1"	2 940	9'8"	3 260	10'8"	3 055	10'0"
O[1]. Overall height of boom	mm	ft in	3 065	10'1"	3 065	10'1"	2 960	9'9"	3 310	10'10"	-	-

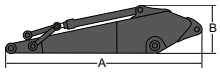
* Without shoe grouser.
[1] 2-piece boom

DIMENSIONS

Boom



Arm



Description	Unit	mono		mono		2-piece		Long-Reach	
Boom	m	5.7	18'8"	5.7 HD	18'8"	5.57	18'3"	8.85	29'0"
Length	mm	5 910	19'5"	5 910	19'5"	5 780	19'0"	9 060	29'9"
Height	mm	1 585	5'2"	1 585	5'2"	1 570	5'2"	1 460	4'9"
Width	mm	670	2'2"	670	2'2"	670	2'2"	670	2'2"
Weight	kg	2 006	4,420	2 151	4,740	2 585	5,700	2 510	5,530

* Includes cylinder, piping and pin, excludes boom cylinder pin

Description	Unit										Long-Reach	
Arm	m	2.0	6'7"	2.5	8'2"	2.9	9'6"	2.9 HD	9'6"	3.5	11'6"	6.25	20'6"
Length	mm	3 065	10'1"	3 525	11'7"	3 910	12'10	3 910	12'10	4 540	14'11	7 330	24'1"
Height	mm	980	3'3"	860	2'10"	860	2'10"	860	2'10"	855	2'10"	945	3'1"
Width	mm	440	1'5"	440	1'5"	440	1'5"	440	1'5"	440	1'5"	385	1'3"
Weight	kg	1 091	2,410	1 133	2,500	1 146	2,530	1 183	2,610	1 226	2,700	1 309	2,890

* Includes cylinder, linkage and pin

Specifications

MACHINE WEIGHTS AND GROUND PRESSURE

Description	Shoe width		Operating weight		Ground pressure		Overall width		Operating weight		Ground pressure		Overall width	
	mm	ft in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
			EC220EL											
			5.7m (18'8") boom, 2.9m (9'6") arm, 860kg / 0.92m³ (1,810lb) bucket, 4 200kg (9,260lb) counterweight						5.57m (18'3") 2-piece, 2.9m (9'6") arm, 860kg / 0.92m³ (1,810lb) bucket, 4 200kg (9,260lb) counterweight					
Triple grouser	500	20	21 480	47,370	53.9	7.8	2 890	9'6"	22 170	48,880	54.9	8.0	2 890	9'6"
	600	24	21 740	47,940	45.1	6.5	2 990	9'10"	22 425	49,450	46.1	6.7	2 990	9'10"
	700	28	22 200	48,950	39.2	5.7	3 090	10'2"	22 880	50,460	40.2	5.8	3 090	10'2"
	800	32	22 485	49,580	35.3	5.1	3 190	10'6"	23 170	51,090	36.3	5.3	3 190	10'6"
	900	36	22 780	50,230	31.4	4.6	3 290	10'10"	23 460	51,740	32.4	4.7	3 290	10'10"
Triple grouser HD	600	24	21 910	48,310	45.1	6.5	2 990	9'10"	22 590	49,820	47.1	6.8	2 990	9'10"
Double grouser	700	28	22 465	49,540	40.2	5.8	3 090	10'2"	23 150	51,050	41.2	6.0	3 090	10'2"
Single grouser	600	24	21 950	48,400	45.1	6.5	2 990	9'10"	22 630	49,910	47.1	6.8	2 990	9'10"
			EC220ELR											
			8.85m (29'0") boom, 6.25m (20'6") arm, 452kg / 0.52m³ (1 000lb) bucket, 5 000kg (11 030lb) counterweight											
Triple grouser	800	32	23 690	52,250	37.3	5.4	3 190	10'6"						
	900	36	23 990	52,890	33.3	4.8	3 290	10'10"						

BUCKET SELECTION GUIDE

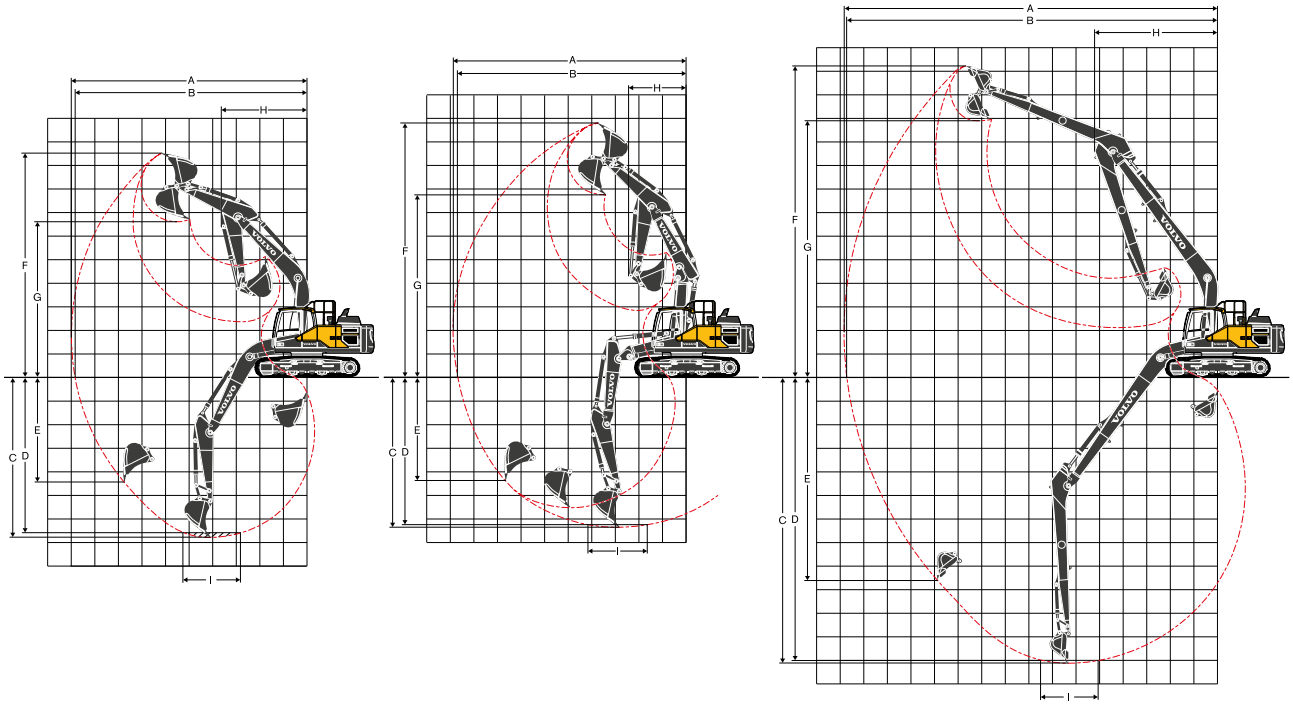
Bucket type		Capacity		Cutting width		Weight		Teeth	EC220EL							
									5.7m (18'8") Boom				5.57m (18'3") 2-piece			
									800mm (32") shoe, 4 200kg (9 260lb) counterweight							
		L	yard³	mm	in	kg	lb	EA	2.0m (6'7")	2.5m (8'2")	2.9m (9'6")	3.5m (11'6")	2.0m (6'7")	2.5m (8'2")	2.9m (9'6")	3.5m (11'6")
Direct fit Buckets	General purpose	480	0.63	600	23.40	666	1,468	3.00	C	C	C	C	C	C	C	C
		590	0.77	750	29.25	711	1,568	3.00	C	C	C	C	C	C	C	C
		750	0.98	900	35.10	792	1,746	4.00	C	C	C	C	C	C	C	C
		920	1.20	1 050	40.95	862	1,900	4.00	C	C	C	C	C	C	C	C
		1 090	1.43	1 200	46.80	951	2,096	5.00	C	C	C	C	C	C	C	C
		1 270	1.66	1 350	52.65	1 038	2,289	5.00	C	C	C	C	C	C	C	C
	Heavy duty	480	0.63	600	23.40	738	1,628	3.00	D	D	D	D	D	D	D	D
		480	0.63	600	23.40	675	1,488	3.00	D	D	D	D	D	D	D	D
		750	0.98	900	35.10	872	1,922	4.00	D	D	D	D	D	D	D	D
		750	0.98	900	35.10	808	1,783	4.00	D	D	D	D	D	D	D	D
		920	1.20	1 050	40.95	951	2,098	4.00	D	D	D	D	D	D	D	D
		920	1.20	1 050	40.95	888	1,959	4.00	D	D	D	D	D	D	D	D
		1 090	1.43	1 200	46.80	1 046	2,307	5.00	D	D	D	D	D	D	D	D
		1 090	1.43	1 200	46.80	983	2,168	5.00	D	D	D	D	D	D	D	D

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.
The recommendations are given as a guide only, based on typical operation conditions.
Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum materal density

	kg/m³	lb/yd³	
A	1 200 - 1 300	2,000 - 2,200	Coal, Caliche, Shale
B	1 400 - 1 600	2,300 - 2,700	Wet earth and clay, Limestone, Sandstone
C	1 700 - 1 800	2,800 - 3,100	Granite, Wet sand, Well blasted rock
D	> 1 900	> 3,200	Wet mud, Iron ore

WORKING RANGES



Description	Unit		EC220EL																EC220ELR	
Boom	m	ft in	5.7 (18'8") mono								5.57 (18'3") 2-piece								8.85	29'0"
Arm	m	ft in	2.0	6'7"	2.5	8'2"	2.9	9'6"	3.5	11'6"	2.0	6'7"	2.5	8'2"	2.9	9'6"	3.5	11'6"	6.25	20'6"
A. Max. digging reach	mm	ft in	9 090	29'10"	9 550	31'4"	9 930	32'7"	10 390	34'1"	8 980	29'6"	9 450	31'0"	9 840	32'3"	10 310	33'10"	15 800	51'10"
B. Max. digging reach on ground	mm	ft in	8 910	29'3"	9 380	30'9"	9 770	32'1"	10 240	33'7"	8 800	28'10"	9 280	30'5"	9 670	31'9"	10 150	33'4"	15 700	51'6"
C. Max. digging depth	mm	ft in	5 830	19'2"	6 330	20'9"	6 730	22'1"	7 330	24'1"	5 410	17'9"	5 900	19'4"	6 300	20'8"	6 850	22'6"	12 100	39'8"
D. Max. digging depth (2.44 m / 8' level)	mm	ft in	5 560	18'3"	6 100	20'0"	6 540	21'5"	7 130	23'5"	5 290	17'4"	5 790	19'0"	6 200	20'4"	6 750	22'2"	12 000	39'4"
E. Max. vertical wall digging depth	mm	ft in	4 880	16'0"	5 620	18'5"	6 090	20'0"	6 470	21'3"	4 390	14'5"	4 990	16'4"	5 410	17'9"	5 930	19'5"	11 290	37'0"
F. Max. cutting height	mm	ft in	8 940	29'4"	9 220	30'3"	9 460	31'0"	9 460	31'0"	10 010	32'10"	10 380	34'1"	10 710	35'2"	10 920	35'10"	13 300	43'8"
G. Max. dumping height	mm	ft in	6 190	20'4"	6 430	21'1"	6 650	21'10"	6 700	22'0"	7 100	23'4"	7 460	24'6"	7 780	25'6"	8 010	26'3"	10 950	35'11"
H. Min. front swing radius	mm	ft in	3 790	12'5"	3 670	12'0"	3 640	11'11"	3 660	12'0"	2 890	9'6"	2 740	9'0"	2 470	8'1"	2 730	8'11"	5 200	17'1"

DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius			mm	ft in	1 528	5'0"	1 528	5'0"	1 528	5'0"	1 528	5'0"	1 528	5'0"	1 528	5'0"	1528	5'0"	1528	5'0"	1250	4'1"
Breakout force - bucket	Normal	SAE J1179	kN	lb	146	32,820	125	28,100	125	28,100	125	28,100	146	32,820	125	28,100	125	28,100	125	28,100	68	15,290
	Power boost	SAE J1179	kN	lb	154	34,620	132	29,670	132	29,670	132	29,670	154	34,620	132	29,670	132	29,670	132	29,670	-	-
	Normal	ISO 6015	kN	lb	165	37,090	141	31,700	141	31,700	141	31,700	165	37,090	141	31,700	141	31,700	141	31,700	77	17,310
	Power boost	ISO 6015	kN	lb	174	39,120	149	33,500	149	33,500	149	33,500	174	39,120	149	33,500	149	33,500	149	33,500	-	-
Tearout force - dipper arm	Normal	SAE J1179	kN	lb	144	32,370	117	26,300	101	22,710	92	20,680	144	32,370	117	26,300	101	22,710	92	20,680	44	9,890
	Power boost	SAE J1179	kN	lb	153	34,400	124	27,880	107	24,050	97	21,810	153	34,400	124	27,880	107	24,050	97	21,810	-	-
	Normal	ISO 6015	kN	lb	149	33,500	121	27,200	104	23,380	94	21,130	149	33,500	121	27,200	104	23,380	94	21,130	45	10,120
	Power boost	ISO 6015	kN	lb	158	35,520	128	28,780	110	24,730	99	22,260	158	35,520	128	28,780	110	24,730	99	22,260	-	-
Rotation angle, bucket			°		166		175		175		175		175		175		175		175		178	

Specifications

LIFTING CAPACITY EC220EL

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

		Lifting hook related to ground level		1.5m (5')				3.0m (10')				4.5m (15')				6.0m (20')			
				Along UC		Across UC		Along UC		Across UC		Along UC		Across UC		Along UC		Across UC	
		m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb
Boom:	5.7m (18'8")	7.5	25																
Arm:	2.5m (8'2")	6.0	20													*5.5	*12,110	*5.5	*12,110
Shoe:	800mm (32")	4.5	15									*7.0	*15,100	*7.0	*15,100	*6.0	*13,120	5.6	12,150
CWT:	4,200kg	3.0	10									*9.0	*19,400	8.2	17,660	*6.9	*14,990	5.4	11,640
	(9,260lb)	1.5	5									*10.8	*23,250	7.7	16,610	*7.8	*16,910	5.2	11,140
		0.0	0									*11.6	*25,050	7.5	16,120	8.0	17,210	5.0	10,810
		-1.5	-5					*10.8	*24,770	*10.8	*24,770	*11.5	*24,900	7.5	16,050	7.9	17,100	5.0	10,710
		-3.0	-10					*14.8	*32,010	14.7	31,560	*10.6	*22,840	7.6	16,280	*7.8	*16,730	5.0	10,890
		-4.5	-15					*11.4	*24,370	*11.4	*24,370	*8.2	*17,180	7.8	16,940				
Boom:	5.7m (18'8")	7.5	25													*5.2		*5.2	
Arm:	2.9m (9'6")	6.0	20													*5.1	*11,170	*5.1	*11,170
Shoe:	800mm (32")	4.5	15													*5.7	*12,330	*5.7	12,310
CWT:	4,200kg	3.0	10									*8.4	*18,180	8.3	17,980	*6.6	*14,300	5.5	11,780
	(9,260lb)	1.5	5									*10.4	*22,370	7.8	16,830	*7.6	*16,400	5.2	11,240
		0.0	0					*5.4	*12,560	*5.4	*12,560	*11.4	*24,740	7.5	16,210	8.0	17,270	5.0	10,860
		-1.5	-5	*6.3	*14,060	*6.3	*14,060	*10.3	*23,490	*10.3	*23,490	*11.6	*25,120	7.4	16,030	7.9	17,090	5.0	10,700
		-3.0	-10	*11.4	*25,580	*11.4	*25,580	*15.7	*33,940	14.6	31,310	*10.9	*23,640	7.5	16,180	8.0	17,190	5.0	10,790
		-4.5	-15					*12.7	*27,330	*12.7	*27,330	*9.1	*19,310	7.7	16,680				
Boom:	5.7m (18'8")	7.5	25																
Arm:	3.5m (11'6")	6.0	20																
Shoe:	800mm (32")	4.5	15													*4.9	*10,720	*4.9	*10,720
CWT:	4,200kg	3.0	10													*5.8	*12,590	5.6	11,980
	(9,260lb)	1.5	5													*6.8	*14,710	5.3	11,380
		0.0	0													*7.6	*16,460	5.1	10,900
		-1.5	-5									*10.8	*23,490	7.4	15,960	7.9	17,040	4.9	10,650
		-3.0	-10					*15.4	*33,360	14.4	30,840	*10.6	*22,860	7.4	15,980	*7.9	17,020	4.9	10,630
		-4.5	-15	*16.7	*38,240	*16.7	*38,240	*13.1	*28,240	*13.1	*28,240	*9.3	*20,080	7.6	16,320	*6.9	*14,650	5.0	10,920

		Lifting hook related to ground level		7.5m (25')				9.0m (30')				Max. reach					
				Along UC		Across UC		Along UC		Across UC		Along UC		Across UC		m	ft
		m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb		
Boom:	5.7m (18'8")	7.5	25									*5.7	*12,540	*5.7	*12,540	5.6	18.0
Arm:	2.5m (8'2")	6.0	20									*5.6	*12,350	4.7	10,400	6.9	22.3
Shoe:	800mm (32")	4.5	15	*5.7		4.0						*5.7	*12,530	3.9	8,630	7.6	24.8
CWT:	4,200kg	3.0	10	6.0	12,850	3.9	8,370					5.4	11,970	3.5	7,790	8.0	26.2
	(9,260lb)	1.5	5	5.9	12,610	3.8	8,140					5.3	11,580	3.4	7,490	8.1	26.5
		0.0	0	5.8	12,450	3.7	7,990					5.4	11,890	3.5	7,650	7.9	25.8
		-1.5	-5									5.9	13,090	3.8	8,380	7.4	24.1
		-3.0	-10									*7.0	*15,470	4.6	10,180	6.5	21.1
		-4.5	-15									*7.2	*15,750	6.8	15,530	5.0	16.0
Boom:	5.7m (18'8")	7.5	25									*4.9	*10,930	*4.9	*10,930	6.2	19.9
Arm:	2.9m (9'6")	6.0	20									*4.6	*10,120	4.2	9,480	7.3	23.8
Shoe:	800mm (32")	4.5	15	*5.4	*11,760	4.0	8,670					*4.5	*9,950	3.6	8,020	8.0	26.2
CWT:	4,200kg	3.0	10	*5.8	*12,560	3.9	8,450					*4.6	*10,220	3.3	7,300	8.4	27.5
	(9,260lb)	1.5	5	5.9	12,670	3.8	8,200					4.9	10,840	3.2	7,030	8.5	27.8
		0.0	0	5.8	12,460	3.7	8,000					5.0	11,090	3.2	7,150	8.3	27.1
		-1.5	-5	5.8	12,400	3.7	7,950					5.5	12,060	3.5	7,750	7.8	25.5
		-3.0	-10									6.5	14,380	4.1	9,180	6.9	22.7
		-4.5	-15									*6.9	*15,270	5.7	12,930	5.6	18.0
Boom:	5.7m (18'8")	7.5	25									*4.9	*10,920	4.5	10,160	7.1	23.0
Arm:	3.5m (11'6")	6.0	20	*4.7	*10,360	4.2	8,940					*4.9	*10,800	3.6	8,060	8.1	26.5
Shoe:	800mm (32")	4.5	15	*4.8	*10,550	4.1	8,820					4.8	10,670	3.2	7,000	8.8	28.6
CWT:	4,200kg	3.0	10	*5.2	*11,410	4.0	8,560	4.6		3.0		4.5	9,900	2.9	6,450	9.1	29.8
	(9,260lb)	1.5	5	*5.7	*12,500	3.8	8,250	4.5	9,680	2.9	6,270	4.4	9,640	2.8	6,250	9.2	30.1
		0.0	0	5.8	12,460	3.7	8,000					4.5	9,820	2.9	6,340	9.0	29.5
		-1.5	-5	5.7	12,310	3.6	7,860					4.8	10,520	3.1	6,770	8.6	28.0
		-3.0	-10	5.7	12,390	3.7	7,930					5.5	12,100	3.5	7,760	7.8	25.5
		-4.5	-15									*5.9	*12,990	4.5	10,010	6.6	21.5

Notes: 1. Machine in “Fine Mode-F” (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

LIFTING CAPACITY EC220ELR

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

		Lifting hook related to ground level		6.0m (20')				7.5m (25')				9.0m (30')				10.5m (35')			
				Along UC		Across UC		Along UC		Across UC		Along UC		Across UC		Along UC		Across UC	
		m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb
Boom:	8.85m (29'0")	12.0	40																
Arm:	6.25m (20'6")	10.5	35														*3,530		*3,530
Shoe:	800mm (32")	9.0	30														*4,750		*4,750
CWT:	5 000kg	7.5	25													*2.2	*4,910	*2.2	*4,910
	(11 030lb)	6.0	20													*2.4	*5,240	*2.4	*5,240
		4.5	15									*2.8	*6,140	*2.8	*6,140	*2.6	*5,700	2.5	5,450
		3.0	10	*4.6	*9,900	*4.6	*9,900	*3.7	*8,060	*3.7	*8,060	*3.2	*6,960	3.1	6,620	*2.9	*6,250	2.4	5,140
		1.5	5	*5.6	*12,040	5.0	10,860	*4.3	*9,370	3.7	8,000	*3.6	*7,820	2.9	6,140	*3.1	*6,830	2.2	4,830
		0	0	*6.4	*13,750	4.6	9,870	*4.9	*10,520	3.4	7,360	*4.0	*8,600	2.7	5,710	*3.4	*7,370	2.1	4,540
		-1.5	-5	*6.9	*14,860	4.3	9,270	*5.3	*11,380	3.2	6,910	4.1	8,920	2.5	5,390	3.3	7,170	2.0	4,310
		-3.0	-10	*7.1	*15,400	4.2	8,970	5.2	11,220	3.1	6,630	4.0	8,690	2.4	5,170	3.3	7,010	1.9	4,160
		-4.5	-15	*7.1	15,410	4.1	8,890	5.2	11,100	3.0	6,520	4.0	8,580	2.4	5,070	3.2	6,930	1.9	4,090
		-6.0	-20	*6.9	*14,980	4.2	8,980	5.2	11,130	3.0	6,550	4.0	8,600	2.4	5,080	3.2	6,960	1.9	4,110
		-7.5	-25	*6.5	*13,970	4.3	9,230	*5.2	*11130	3.1	6,710	4.0	8,750	2.4	5,220	3.3	7,130	2.0	4,270
		-9.0	-30	*5.7	*12,200	4.5	9,650	*4.6	*9,710	3.2	7,040	*3.6	*7,640	2.5	5,540				
		-10.5	-35	*4.4	*9,090	*4.4	*9,090	*3.4		*3.4									

Lifting hook related to ground level		12.0m (40')				13.5m (45')				Max. reach					
		Along UC		Across UC		Along UC		Across UC		Along UC		Across UC		m	ft
m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb		
12.0	40									*0.8	*1,950	*0.9	*1,950	10.3	33.1
10.5	35									*0.8	*1,780	*0.8	*1,780	11.6	37.7
9.0	30	*1.5	*2,610	*1.5	*2,610					*0.8	*1,680	*0.8	*1,680	12.6	41.1
7.5	25	*2.1	*4,190	*2.1	*4,190					*0.7	*1,630	*0.7	*1,630	13.4	43.7
6.0	20	*2.3	*5,120	2.1	4,420	*1.3	*2,230	*1.3	*2230	*0.7	*1,620	*0.7	*1,620	13.9	45.6
4.5	15	*2.5	*5,410	2.0	4,260	*1.8	*3,440	1.6	3,330	*0.8	*1,650	*0.8	*1,650	14.3	46.9
3.0	10	*2.6	*5,770	1.9	4,060	*2.2	*4,230	1.5	3,220	*0.8	*1,710	*0.8	*1,710	14.5	47.6
1.5	5	*2.8	*6,160	1.8	3,850	2.4	*4,720	1.4	3,090	*0.8	*1,810	*0.8	*1,810	14.6	47.8
0	0	2.82	6,070	1.7	3,660	2.3	*4,830	1.4	2,980	*0.9	*1,950	*0.9	*1,950	14.4	47.4
-1.5	-5	2.74	5,910	1.6	3,510	2.3	*4,250	1.4	2,890	*1.0	*2,150	*1.0	*2,150	14.2	46.5
-3.0	-10	2.69	5,800	1.6	3,410	*1.7	*2,460	1.3	*2460	*1.1	*2,430	*1.1	*2,430	13.7	45.0
-4.5	-15	2.67	5,780	1.6	3,380					*1.3	*2,850	*1.3	*2,850	13.1	42.9
-6.0	-20	*2.4	*3,580	1.6	3,460					*1.6	*3,490	1.6	3,460	12.3	40.0
-7.5	-25									*2.0	*4,590	1.8	4,100	11.2	36.3
-9.0	-30									*3.0	*6,990	2.3	5,280	9.7	31.2
-10.5	-35									*3.3	*7,140	*3.3	*7,140	7.6	24.2

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.