

**VOLVO EXCAVATOR**

# EC290B LC



- **Engine power, gross:**  
153 kW 205 hp
- **Operating weight:**  
28.3 ~ 30.0 t  
62,340 ~ 66,080 lb
- **Buckets (SAE):**  
1,025 ~ 2,100 l  
1.34 ~ 2.75 yd<sup>3</sup>
- Turbocharged Volvo diesel engine with direct injection and charged air cooler meets EPA Tier 3 emission standards
- Contronics, Volvo's advanced mode selection system and electronically-controlled system
- 2 variable displacement axial piston pumps. Independent and simultaneous movements of the digging equipment are controlled by "Automatic Sensing Work Mode"
- Cab
  - Ergonomic environment for easier operator use
  - Low sound level
  - Filtered air
  - Hydraulic dampening mounts
  - Fabric seat with heater and air suspension
- Strong digging equipment produced by robotic welding
- High lifting, breakout and tearout forces for tough digging conditions
- Long undercarriage for excellent stability
- Auxiliary hydraulic valve is standard
- Prepared for a number of optional items

**VOLVO**



## ENGINE

The new Tier 3 compliant off-road engine with Volvo Advanced Combustion Technology (V-ACT) features electronically-controlled, common-rail direct fuel injection, internal exhaust gas recirculation (I-EGR) and Engine Management System technology for lower emissions, superior performance and outstanding fuel efficiency.

**Air Filter:** 3-stage and 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.

### Low-Emission Engine:

Make	VOLVO	
Model	D7E EAE3	
Power output at	30 r/s	<b>1,800 rpm</b>
Net (ISO 9249/ SAE J1349)	143 kW	<b>192 hp</b>
Gross (SAE J1995)	153 kW	<b>205 hp</b>
Max. torque at 1,350 rpm	965 N·m	<b>712 lb-ft</b>
No. of cylinders	6	
Displacement	7.1 l	<b>436 cu.in</b>
Bore	108 mm	<b>4.25"</b>
Stroke	130 mm	<b>5.12"</b>



## ELECTRICAL SYSTEM

High-capacity electrical system that is well protected. 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	24 V
Batteries	2 x 12 V
Battery capacity	200 Ah
Alternator	28 V / 80 A



## SERVICE REFILL CAPACITIES

Fuel tank	470 l	<b>124 gal</b>
Hydraulic system, total	400 l	<b>106 gal</b>
Hydraulic tank	195 l	<b>52 gal</b>
Engine oil	30 l	<b>8 gal</b>
Engine coolant	36 l	<b>10 gal</b>
Swing reduction unit	11 l	<b>2.9 gal</b>
Travel reduction unit	2 x 5.0 l	<b>2 x 1.3 gal</b>



## SWING SYSTEM

The superstructure is swung by the means of an axial piston motor and a planetary reduction gear. Automatic swing holding brake and anti-rebound valve are standard.

Max. swing speed ..... 10.2 rpm



## 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 (tractive effort)	230.5 kN	<b>51,810 lb</b>
Max. travel speed	3.3/5.2 km/h	<b>2.1/3.2 mph</b>
Gradeability	35°	<b>70%</b>



## UNDERCARRIAGE

The undercarriage has a robust X-shaped frame. Greased and sealed track chains are standard.

No. of track pads	2 x 50	
Link pitch	203 mm	<b>8.0"</b>
Shoe width, triple grouser	600/700/800(Std.)/900 mm	<b>24"/28"/32"(Std.)/36"</b>
Shoe width, double grouser	700 mm	<b>28"</b>
No. of bottom track rollers	2 x 9	
No. of top rollers	2 x 2	



## HYDRAULIC SYSTEM

The hydraulic system, also known as the "Automatic Sensing Work Mode," is designed for high productivity, high-digging capacity, high-maneuvering precision and good fuel economy. The summation system, boom, arm and swing priority, along with boom and arm regeneration, provide optimum performance.

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.

**Boom priority:** Gives priority to the boom operation for faster raising when loading or performing deep excavations.

**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 .... 2 x 250 l/min     **2 x 66 gpm**

### Pilot pump:

Type ..... Gear pump  
Maximum flow .... 1 x 19 l/min     **5.0 gpm**

### Hydraulic motors:

Travel ..... Variable displacement axial piston motor with mechanical brake  
Swing ..... Fixed displacement axial piston motor with mechanical brake

### Relief valve setting:

Implement ..... 31.4/34.3 Mpa     **4,550/4,980 psi**  
Travel circuit ..... 34.3 Mpa     **4,980 psi**  
Swing circuit ..... 26.5 Mpa     **3,840 psi**  
Pilot circuit ..... 3.9 Mpa     **570 psi**

### Hydraulic cylinders:

Boom ..... 2  
Bore x Stroke ..  $\varnothing 140 \times 1,480$  mm  
                          **$\varnothing 5.5" \times 58.3"$**   
Arm ..... 1  
Bore x Stroke ..  $\varnothing 150 \times 1,745$  mm  
                          **$\varnothing 5.9" \times 68.7"$**   
Bucket ..... 1  
Bore x Stroke ..  $\varnothing 140 \times 1,140$  mm  
                          **$\varnothing 5.5" \times 44.9"$**



## 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 13 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 71 dB(A)  
External sound level  
according to ISO 6395  
and EU Directive 2000/14/EC ..... LwA 104 dB(A)



## GROUND PRESSURE

- Machine with Std. 6.2 m, **20' 4"** boom, 3.05 m, **10' 0"** arm, 975 kg, **2,150 lb** bucket and 5,400 kg, **11,910 lb** counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm <b>24"</b>	28,270 kg <b>62,340 lb</b>	53.5 kPa <b>7.8 psi</b>	3,190 mm <b>10' 6"</b>
	700 mm <b>28"</b>	28,830 kg <b>63,570 lb</b>	46.8 kPa <b>6.8 psi</b>	3,290 mm <b>10' 10"</b>
	800 mm <b>32"</b>	29,200 kg <b>64,390 lb</b>	41.4 kPa <b>6.0 psi</b>	3,390 mm <b>11' 1"</b>
	900 mm <b>36"</b>	29,570 kg <b>65,200 lb</b>	37.3 kPa <b>5.4 psi</b>	3,490 mm <b>11' 5"</b>
Double grouser	700 mm <b>28"</b>	28,830 kg <b>63,570 lb</b>	46.8 kPa <b>6.8 psi</b>	3,290 mm <b>10' 10"</b>

- Machine with Std. 6.2 m, **20' 4"** boom, 3.05 m, **10' 0"** arm, 975 kg, **2,150 lb** bucket and 5,800 kg, **12,790 lb** counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm <b>24"</b>	28,670 kg <b>63,220 lb</b>	54.2 kPa <b>7.9 psi</b>	3,190 mm <b>10' 6"</b>
	700 mm <b>28"</b>	29,230 kg <b>64,450 lb</b>	47.4 kPa <b>6.9 psi</b>	3,290 mm <b>10' 10"</b>
	800 mm <b>32"</b>	29,600 kg <b>65,270 lb</b>	42.0 kPa <b>6.1 psi</b>	3,390 mm <b>11' 1"</b>
	900 mm <b>36"</b>	29,970 kg <b>66,080 lb</b>	37.8 kPa <b>5.5 psi</b>	3,490 mm <b>11' 5"</b>
Double grouser	700 mm <b>28"</b>	29,230 kg <b>64,450 lb</b>	47.4 kPa <b>6.9 psi</b>	3,290 mm <b>10' 10"</b>

## MAX. PERMITTED BUCKETS

*Note: 1. Bucket size based on ISO 7451, heaped material with a 1:1 angle of repose.  
2. "Max. permitted sizes" are for reference only and are not necessarily available from the factory.*

- Max. permitted sizes for pin-on buckets:  
Counterweight 5,400 kg, 11,910 lb

Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
GP bucket 1.5 t/m <sup>3</sup> , 2,530 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	2,000, 2.62	1,825, 2.39	1,550, 2.03
GP bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,750, 2.29	1,600, 2.09	1,350, 1.77
HD bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,550, 2.03	1,400, 1.83	1,200, 1.57
HD bucket 2.0 t/m <sup>3</sup> , 3,370 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,425, 1.86	1,300, 1.70	1,100, 1.44

- Max. permitted sizes for hook-on buckets:  
Counterweight 5,400 kg, 11,910 lb

Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
GP bucket 1.5 t/m <sup>3</sup> , 2,530 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,900, 2.49	1,725, 2.26	1,450, 1.90
GP bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,650, 2.16	1,500, 1.96	1,250, 1.64
HD bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,475, 1.93	1,325, 1.73	1,100, 1.44
HD bucket 2.0 t/m <sup>3</sup> , 3,370 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,350, 1.77	1,225, 1.60	1,025, 1.34

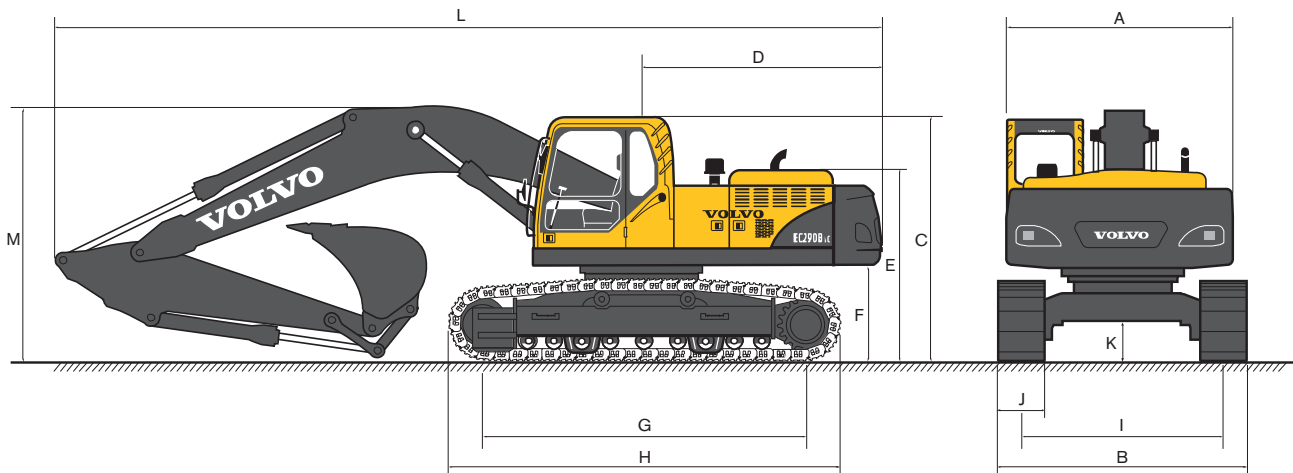
- Max. permitted sizes for pin-on buckets:  
Counterweight 5,800 kg, 12,790 lb

Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
GP bucket 1.5 t/m <sup>3</sup> , 2,530 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	2,100, 2.75	1,900, 2.49	1,625, 2.13
GP bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,825, 2.39	1,650, 2.16	1,425, 1.86
HD bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,600, 2.09	1,450, 1.90	1,250, 1.64
HD bucket 2.0 t/m <sup>3</sup> , 3,370 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,500, 1.96	1,350, 1.77	1,150, 1.50

- Max. permitted sizes for hook-on buckets:  
Counterweight 5,800 kg, 12,790 lb

Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
GP bucket 1.5 t/m <sup>3</sup> , 2,530 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	2,000, 2.62	1,800, 2.35	1,525, 1.99
GP bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,750, 2.29	1,575, 2.06	1,325, 1.73
HD bucket 1.8 t/m <sup>3</sup> , 3,030 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,525, 1.99	1,375, 1.80	1,175, 1.54
HD bucket 2.0 t/m <sup>3</sup> , 3,370 lb/yd <sup>3</sup>	l, yd <sup>3</sup>	1,425, 1.86	1,275, 1.67	1,075, 1.41

## DIMENSIONS

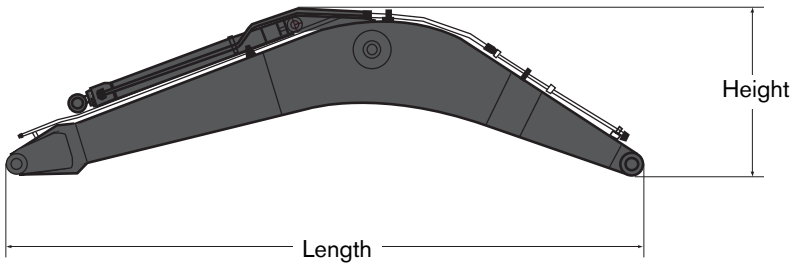


Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
A. Overall width of superstructure	mm, ft-in	2,890, 9' 6"	2,890, 9' 6"	2,890, 9' 6"
B. Overall width	mm, ft-in	3,390, 11' 1"	3,390, 11' 1"	3,390, 11' 1"
C. Overall height of cab	mm, ft-in	3,030, 9' 11"	3,030, 9' 11"	3,030, 9' 11"
D. Tail swing radius	mm, ft-in	3,000, 9' 10"	3,000, 9' 10"	3,000, 9' 10"
E. Overall height of engine hood	mm, ft-in	2,400, 7' 10"	2,400, 7' 10"	2,400, 7' 10"
F. Counterweight clearance *	mm, ft-in	1,145, 3' 9"	1,145, 3' 9"	1,145, 3' 9"
G. Tumbler length	mm, ft-in	4,015, 13' 2"	4,015, 13' 2"	4,015, 13' 2"
H. Track length	mm, ft-in	4,870, 16' 0"	4,870, 16' 0"	4,870, 16' 0"
I. Track gauge	mm, ft-in	2,590, 8' 6"	2,590, 8' 6"	2,590, 8' 6"
J. Shoe width	mm, in	800, 32"	800, 32"	800, 32"
K. Min. ground clearance *	mm, ft-in	480, 1' 7"	480, 1' 7"	480, 1' 7"
L. Overall length	mm, ft-in	10,500, 4' 11"	10,420, 34' 2"	10,460, 34' 4"
M. Overall height of boom	mm, ft-in	3,430, 11' 3"	3,290, 10' 10"	3,680, 12' 1"

\* Without shoe grouser

## DIMENSIONS

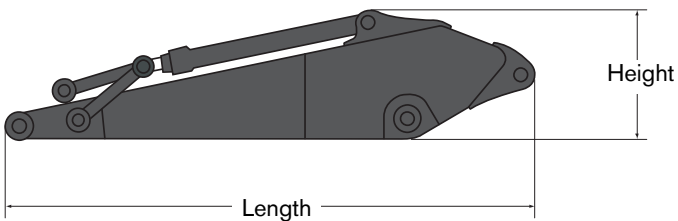
### ● Boom



Description	6.2 m, 20' 4"	
	Standard	Heavy-duty
Length	6,430 mm, 21' 1"	6,430 mm, 21' 1"
Height	1,680 mm, 5' 6"	1,680 mm, 5' 6"
Width	770 mm, 2' 6"	770 mm, 2' 6"
Weight	2,480 kg, 5,470 lb	2,590 kg, 5,710 lb

\* Includes cylinder, pin and piping

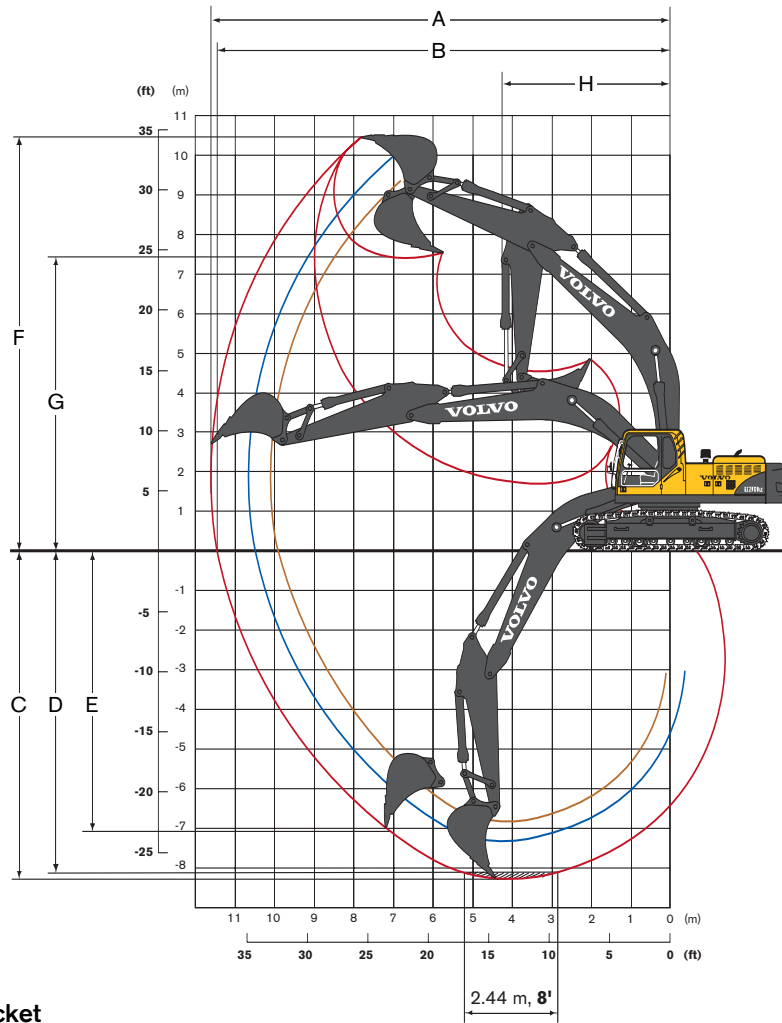
### ● Arm



Description	2.55 m, 8' 4"	3.05 m, 10' 0"		4.0 m, 13' 1"
		Standard	Heavy-duty	
Length	3,710 mm, 12' 2"	4,150 mm, 13' 7"	4,150 mm, 13' 7"	5,100 mm, 16' 9"
Height	1,010 mm, 3' 4"	1,010 mm, 3' 4"	1,010 mm, 3' 4"	1,070 mm, 3' 6"
Width	545 mm, 1' 9"	545 mm, 1' 9"	545 mm, 1' 9"	545 mm, 1' 9"
Weight	1,475 kg, 3,250 lb	1,540 kg, 3,400 lb	1,520 kg, 3,350 lb	1,740 kg, 3,840 lb

\* Includes cylinder, piping and linkage

# WORKING RANGES & DIGGING FORCES



● **Machine with pin-on bucket**

Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
A. Max. digging reach	mm, ft-in	10,160, 33' 4"	10,690, 35' 1"	11,575, 38' 0"
B. Max. digging reach on ground	mm, ft-in	9,950, 32' 8"	10,490, 34' 5"	11,400, 37' 5"
C. Max. digging depth	mm, ft-in	6,830, 22' 5"	7,320, 24' 0"	8,280, 27' 2"
D. Max. digging depth (8' level)	mm, ft-in	6,590, 21' 7"	7,140, 23' 5"	8,130, 26' 8"
E. Max. vertical wall digging depth	mm, ft-in	5,440, 17' 10"	6,200, 20' 4"	7,110, 23' 4"
F. Max. cutting height	mm, ft-in	9,620, 31' 7"	10,040, 32' 11"	10,460, 34' 4"
G. Max. dumping height	mm, ft-in	6,690, 21' 11"	7,050, 23' 2"	7,470, 24' 6"
H. Min. front swing radius	mm, ft-in	4,220, 13' 10"	4,180, 13' 9"	4,280, 14' 1"

● **Digging forces with pin-on bucket**















Boom	Unit	Std. 6.2 m, 20' 4"		
Arm		2.55 m, 8' 4"	Std. 3.05 m, 10' 0"	4.0 m, 13' 1"
Bucket tip radius	mm, in	1,600, 63"	1,600, 63"	1,600, 63"
Breakout force – bucket (Normal/Power boost)	SAE	kN lb	157.8/172.6 35,480/38,810	157.8/172.6 35,480/38,810
Tearout force – arm (Normal/Power boost)	SAE	kN lb	145.0/158.7 32,610/35,680	123.4/134.9 27,740/30,340
Rotation angle, bucket	deg	179°	179°	179°



# LIFTING CAPACITY (At the arm end without bucket)

Note: For lifting capacity including bucket, simply subtract actual weight of the pin-on bucket or the bucket with quickcoupler from the following values.

## EC290B LC (Std. shoe 800 mm, 32", counterweight 5,400 kg, 11,910 lb)















 Across under-carriage  Along under-carriage	Lifting hook related to ground level	4.5 m, 15'		6.0 m, 20'		7.5 m, 25'		9.0 m, 30'		Max. reach					
		 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	 t lb	Max. m / ft	
															t
Std. boom 6.2 m 20' 4" + Arm 2.55 m 8' 4"	7.5 25'			*7.3 *16,240	*7.3 *16,240								*7.5 *16,480	6.9 15,520	6.5 / 21.01
	6.0 20'			*7.6 *16,650	*7.6 *16,650	*7.4 *16,270	5.4 11,540						*7.5 *16,420	5.3 11,850	7.5 / 24.59
	4.5 15'	*10.7 *23,070	*10.7 *23,070	*8.7 *18,770	7.4 16,020	*7.7 *16,910	5.3 11,310						7.2 16,050	4.6 10,110	8.2 / 26.76
	3.0 10'	*13.7 *29,450	10.6 22,940	*10.0 *21,640	7.0 15,170	8.2 17,540	5.1 10,930						6.7 14,810	4.2 9,250	8.5 / 27.86
	1.5 5'	*15.8 *34,000	10.0 21,590	11.2 24,040	6.7 14,440	8.0 17,130	4.9 10,560						6.6 14,440	4.1 8,950	8.5 / 28.03
	0 0'	*16.3 *35,370	9.8 21,110	10.9 23,540	6.5 14,010	7.8 16,850	4.8 10,310						6.7 14,870	4.2 9,170	8.3 / 27.27
	-1.5 -5'	*15.9 *34,540	9.8 21,110	10.9 23,400	6.4 13,890	7.8 16,820	4.8 10,280						7.4 16,350	4.5 10,020	7.8 / 25.52
	-3.0 -10'	*14.6 *31,660	10.0 21,440	11.0 23,640	6.5 14,090								8.9 19,840	5.4 12,060	6.9 / 22.51
-4.5 -15'	*11.8 *25,170	10.3 22,240										*9.5 *20,860	7.8 17,600	5.5 / 17.62	
Std. boom 6.2 m 20' 4" + Std. arm 3.05 m 10' 0"	7.5 25'												*5.8 *12,830	*5.8 *12,830	7.2 / 23.29
	6.0 20'					*6.8 15,040	5.5 11,730						*5.5 *12,220	4.7 10,530	8.1 / 26.56
	4.5 15'			*8.1 *17,470	7.5 16,270	*7.3 *15,880	5.3 11,450						*5.5 *12,170	4.1 9,150	8.7 / 28.57
	3.0 10'	*12.7 *27,280	10.9 23,500	*9.5 *20,490	7.1 15,380	*8.0 *17,360	5.1 11,030	*6.0 *13,310	3.8 8,000			*5.7 *12,570	3.8 8,440	9.0 / 29.61	
	1.5 5'	*15.1 *32,600	10.2 21,900	*10.8 *23,370	6.8 14,570	8.0 17,180	4.9 10,600	6.1 12,720	3.8 7,820			6.0 13,200	3.7 8,190	9.1 / 29.76	
	0 0'	*16.2 *35,020	9.8 21,160	11.0 23,580	6.5 14,030	7.8 16,830	4.8 10,290					6.1 13,530	3.8 8,340	8.9 / 29.06	
	-1.5 -5'	*16.2 *35,030	9.8 21,000	10.9 23,330	6.4 13,810	7.8 16,700	4.7 10,170					6.6 14,670	4.1 9,010	8.4 / 27.42	
	-3.0 -10'	*15.2 *32,950	9.9 21,210	10.9 23,430	6.4 13,900	7.8 16,850	4.8 10,320					7.8 17,220	4.7 10,520	7.5 / 24.65	
-4.5 -15'	*13.0 *27,920	10.1 21,810	*9.5 *20,080	6.7 14,430								*8.9 *19,570	6.3 14,160	6.3 / 20.30	
Std. boom 6.2 m 20' 4" + Arm 4.0 m 13' 1"	7.5 25'					*5.6 *12,170	*5.6 *12,140						*4.1 *9,160	*4.1 *9,160	8.3 / 26.93
	6.0 20'					*5.7 *12,600	5.6 12,030	*4.5 *9,250	4.0 8,680			*4.0 *8,790	3.9 8,750	9.1 / 29.79	
	4.5 15'					*6.3 *13,760	5.4 11,650	*6.0 *12,360	4.0 8,530			*4.0 *8,750	3.5 7,740	9.7 / 31.60	
	3.0 10'	*10.5 *22,680	*10.5 *22,680	*8.2 *17,850	7.3 15,700	*7.1 *15,480	5.2 11,130	6.2 13,290	3.9 8,280			*4.1 *8,990	3.3 7,190	9.9 / 32.54	
	1.5 5'	*13.4 *28,980	10.4 22,360	*9.8 *21,170	6.8 14,700	*8.0 17,200	4.9 10,580	6.0 12,980	3.7 8,000			*4.3 *9,500	3.2 6,970	10.0 / 32.68	
	0 0'	*15.3 *33,080	9.8 21,080	10.9 23,520	6.5 13,940	7.8 16,710	4.7 10,140	5.9 12,730	3.6 7,760			*4.7 *10,380	3.2 7,040	9.8 / 32.04	
	-1.5 -5'	*16.0 *34,670	9.5 20,540	10.7 23,030	6.3 13,510	7.6 16,410	4.6 9,870	5.9 12,610	3.6 7,660			*5.4 *11,870	3.4 7,470	9.3 / 30.56	
	-3.0 -10'	*15.7 *34,090	9.5 20,500	10.7 22,910	6.2 13,400	7.6 16,360	4.6 9,830					6.3 13,890	3.8 8,430	8.6 / 28.11	
-4.5 -15'	*14.4 *31,140	9.7 20,870	*10.8 *23,120	6.3 13,640	7.7 16,660	4.7 10,110					7.7 17,280	4.7 10,460	7.5 / 24.40		

- 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.  
 5. Contains metric and U.S. measurement charts.

# LIFTING CAPACITY (At the arm end without bucket)

Note: For lifting capacity including bucket, simply subtract actual weight of the pin-on bucket or the bucket with quickcoupler from the following values.

## EC290B LC (Std. shoe 800 mm, 32", counterweight 5,800 kg, 12,790 lb)

 Across under-carriage  Along under-carriage	Lifting hook related to ground level	4.5 m, 15'		6.0 m, 20'		7.5 m, 25'		9.0 m, 30'		Max. reach						
														Max. m / ft		
		t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	
Std. boom 6.2 m 20' 4" + Arm 2.55 m 8' 4"	7.5 25'					*7.3 *16,240	*7.3 *16,240							*7.5 *16,480	7.1 16,140	6.5 / 21.01
	6.0 20'					*7.6 *16,650	*7.6 *16,650	*7.4 *16,270	5.6 12,020					*7.5 *16,420	5.5 12,360	7.5 / 24.59
	4.5 15'	*10.7 *23,070	*10.7 *23,070	*8.7 *18,770	7.7 16,690	*7.7 *16,910	5.5 11,810							7.5 16,640	4.8 10,570	8.2 / 26.76
	3.0 10'	*13.7 *29,450	11.1 23,920	*10.0 *21,640	7.3 15,840	*8.4 18,180	5.3 11,430							7.0 15,360	4.4 9,690	8.5 / 27.86
	1.5 5'	*15.8 *34,000	10.5 22,570	*11.2 *24,220	7.0 15,100	8.3 17,760	5.1 11,060							6.8 14,990	4.3 9,390	8.5 / 28.03
	0 0'	*16.3 *35,370	10.3 22,090	11.4 24,410	6.8 14,670	8.1 17,490	5.0 10,810							7.0 15,440	4.4 9,620	8.3 / 27.27
	-1.5 -5'	*15.9 *34,540	10.3 22,090	11.3 24,280	6.7 14,550	8.1 17,460	5.0 10,780							7.7 16,970	4.8 10,510	7.8 / 25.52
	-3.0 -10'	*14.6 *31,660	10.4 22,420	*11.0 *23,820	6.8 14,750									9.3 *20,420	5.7 12,630	6.9 / 22.51
-4.5 -15'	*11.8 *25,170	10.8 23,220											*9.5 *20,860	8.1 18,380	5.5 / 17.62	
Std. boom 6.2 m 20' 4" + Std. arm 3.05 m 10' 0"	7.5 25'													*5.8 *12,830	*5.8 *12,830	7.2 / 23.29
	6.0 20'							*6.8 *15,040	5.7 12,230					*5.5 *12,220	4.9 11,000	8.1 / 26.56
	4.5 15'					*8.1 *17,470	7.9 16,930	*7.3 *15,880	5.6 11,950					*5.5 *12,170	4.3 9,580	8.7 / 28.57
	3.0 10'	*12.7 *27,280	11.3 24,480	*9.5 *20,490	7.4 16,040	*8.0 *17,360	5.4 11,530	*6.0 *13,250	4.0 8,910					*5.7 *12,570	4.0 8,850	9.0 / 29.61
	1.5 5'	*15.1 *32,600	10.6 22,880	*10.8 *23,370	7.1 15,230	8.3 17,820	5.2 11,100	6.3 13,830	3.9 8,700					*6.1 *13,420	3.9 8,590	9.1 / 29.76
	0 0'	*16.2 *35,020	10.3 22,140	11.4 24,460	6.8 14,700	8.1 17,470	5.0 10,790							6.4 14,060	4.0 8,760	8.9 / 29.06
	-1.5 -5'	*16.2 *35,030	10.2 21,980	11.3 24,200	6.7 14,480	8.0 17,340	4.9 10,670							6.9 15,230	4.3 9,450	8.4 / 27.42
	-3.0 -10'	*15.2 *32,950	10.3 22,190	11.3 24,300	6.8 14,560	8.1 17,510	5.0 10,820							8.1 17,870	5.0 11,030	7.5 / 24.65
-4.5 -15'	*13.0 *27,920	10.6 22,790	*9.5 *20,080	7.0 15,090									*8.9 *19,570	6.6 14,810	6.3 / 20.30	
Std. boom 6.2 m 20' 4" + Arm 4.0 m 13' 1"	7.5 25'							*5.6 *12,170	*5.6 *12,170					*4.1 *9,160	*4.1 *9,160	8.3 / 26.93
	6.0 20'							*5.7 *12,600	*5.7 12,530	*4.5 *9,890	4.2 9,050			*4.0 *8,790	*4.0 *8,790	9.1 / 29.79
	4.5 15'							*6.3 *13,760	5.6 12,150	*6.0 *12,360	4.2 8,930			*4.0 *8,750	3.7 8,120	9.7 / 31.60
	3.0 10'	*10.5 *22,680	*10.5 *22,680	*8.2 *17,850	7.6 16,360	*7.1 *15,480	5.4 11,630	6.4 13,790	4.0 8,680	*4.1 *8,990	3.4 7,560			*4.1 *8,990	3.4 7,560	9.9 / 32.54
	1.5 5'	*13.4 *28,980	10.8 23,340	*9.8 *21,170	7.1 15,360	*8.0 *17,340	5.1 11,080	6.3 13,480	3.9 8,400	*4.3 *9,500	3.3 7,330			*4.3 *9,500	3.3 7,330	10.0 / 32.68
	0 0'	*15.3 *33,080	10.2 22,060	*11.0 *23,780	6.8 14,600	8.1 17,350	4.9 10,640	6.1 13,230	3.8 8,170	*4.7 *10,380	3.4 7,410			*4.7 *10,380	3.4 7,410	9.8 / 32.04
	-1.5 -5'	*16.0 *34,670	10.0 21,520	11.1 23,900	6.6 14,170	7.9 17,050	4.8 10,370	6.1 13,110	3.7 8,060	*5.4 *11,870	3.6 7,860			*5.4 *11,870	3.6 7,860	9.3 / 30.56
	-3.0 -10'	*15.7 *34,090	10.0 21,480	11.1 23,790	6.5 14,070	7.9 17,000	4.8 10,330							6.5 14,430	4.0 8,860	8.6 / 28.11
-4.5 -15'	*14.4 *31,140	10.1 21,850	*10.8 *23,120	6.6 14,300	*8.0 *17,190	4.9 10,610							*8.0 *17,630	4.9 10,970	7.5 / 24.40	

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



## STANDARD EQUIPMENT

### Engine

Turbocharged, 4-stroke diesel engine with water cooling, direct injection and charged air cooler that meets EPA (Environment Protection Agency) Tier 3 emission standards

3-stage air filter with indicator and precleaner

Air intake heater

Electric engine shut-off

Remote diesel water separator

Coolant filter

Remote engine oil filter

Variable radiator & charged air cooling fan speed

Alternator, 80 A

### Electric/Electronic control system

Contronics

- Advanced mode control system

- Self-diagnostic system

Machine status indication

Engine speed sensing power control

Automatic idling system

One-touch power boost

Safety stop/start function

Travel alarm

Adjustable monitor

Master switch

Engine restart prevention circuit

High-capacity halogen lights:

- Frame-mounted 2

- Boom-mounted 2

Batteries, 2 x 12 V / 200 Ah

Start motor, 24 V / 4.8 kW

### Hydraulic system

Automatic hydraulic system

- Summation system

- Boom priority

- Arm priority

- Swing priority

Hydraulic piping

- Hammer & shear:

1 pump flow

- Quick coupler piping

Boom and arm regeneration valves

Swing anti-rebound valves

Boom and arm holding valves

Pump flow control for hammer &

shear

Multi-stage filtering system

Cylinder cushioning

Cylinder contamination seals

Auxiliary hydraulic valve

Straight travel circuit

Automatic two-speed travel motors

Hydraulic oil, ISO VG 46

Variable oil cooling fan speed

Swing out oil cooler for easy cleaning

### Superstructure

Access way with handrail

Full height counterweight

5,800 kg, **12,790 lb**

Tool storage area

Punched metal anti-slip plates

Undercover (heavy-duty 4,5 mm,

**0.18"**)

### Cab and interior

Fabric seat with heater and air

suspension

Pilot-operated wrist control joysticks

with 3 switches each

Heater & air-conditioner, automatic

Hydraulic dampening cab mounts

Adjustable operator seat and

joystick control console

Flexible antenna

Hydraulic safety lock lever

Cab, all-weather sound suppressed,

includes:

- Ashtray

- Cup holder

- Lighter

- Door locks

- Tinted glass

- Floor mat

- Horn

- Large storage area

- Pull-up type front window

- Removable lower windshield

- Seat belt

- Safety glass

- Sun shield, front, roof, rear

- Windshield wiper with

intermittent feature

- Stereo cassette radio

Anti-vandalism kit assembly

preparation

Master ignition key

### Undercarriage

Hydraulic track adjusters

Greased and sealed track chain

Track guards

Undercover (4,5 mm, **0.18"**)

Front and rear towing eye

### Track shoes

Track shoes 800 mm, **32"** with

triple grousers

### Digging equipment

Boom: 6.2 m, **20' 4"**

Arm: 3.2 m, **10' 6"**

## OPTIONAL EQUIPMENT *(Standard in certain markets)*

### Engine

Block heater: 120 V

Oil-bath precleaner

10kW diesel driven engine coolant heater

Fuel filler pump: 50 l/min, **13.2 gpm**

with automatic shut-off

Water separator with heater

### Electric

Extra lamps:

- Cab-mounted 3 (front 2, rear 1)

- Counterweight-mounted 1

Overload warning device

Rotating warning beacon

Anti-theft system

### Hydraulic system

Hose rupture valve: boom, arm

Hydraulic piping

- Hammer & shear:

2 pump flow

Additional return filter

Extra piping for slope & rotator

- Slope & rotator

- Grapple

- Oil leak (drain) line

Volvo hydraulic quickcoupler, S2 size

Hydraulic oil, ISO VG 32

Hydraulic oil, ISO VG 68

Hydraulic oil, biodegradable 32

Hydraulic oil, biodegradable 46

Straight travel pedal

### Superstructure

Full height counterweight

5,400 kg, **11,910 lb**

### Cab and interior

Fabric seat

Control joystick with semi-long levers

Control joystick with 5 switches each

Air-conditioner, manual

Falling object guard (FOG)

Cab-mounted falling object

protective structures (FOPS)

Sunlight protection, roof (steel)

Rain shield, front

Safety screen for front window

Lower wiper

Anti-vandalism kit

### Undercarriage

Full track guards

Undercover (heavy-duty 10 mm,

**0.39"**)

### Track shoes

600/700/900 mm,

**24"/28"/36"** track shoes with

triple grousers

700 mm, **28"** track shoe with

double grouser

### Digging equipment

Boom: 6.2 m, **20' 4"** heavy-duty

Arm: 2.55 m, **8' 4"**

4.0 m, **13' 1"**

### Service

Hand lamp

Spare parts

Tool kit, full scale

*All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and designs without prior notice. The illustrations do not necessarily show the standard version of the machine.*

# VOLVO

## Construction Equipment

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