

**VOLVO EXCAVATORS**

# **EC210B LR EC240B LR / EC290B LR**



- **Engine power, gross:**
  - EC210B LR: 119 kW (159 hp)
  - EC240B LR: 134 kW (180 hp)
  - EC290B LR: 153 kW (205 hp)
- **Operating weight:**
  - EC210B LR: 23.2 t
  - EC240B LR: 27.6 t
  - EC290B LR: 31.6 t
- **Buckets (SAE):**
  - EC210B LR: 520 l
  - EC240B LR: 520 l
  - EC290B LR: 520 l, 570 l
- Turbocharged VOLVO diesel engine with direct injection and charged air cooler
- 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
- Developed for use in dredging, ditch cleaning, bank sloping and land leveling
- Long undercarriage for excellent stability
- Auxiliary hydraulic valve is standard
- Prepared for a number of optional items

**VOLVO**

## SPECIFICATIONS

### • EC210B LR

Description		Specification
Operating weight		23,220 kg
Bucket capacity: SAE / CECE		520 l / 450 l
Engine	Model	VOLVO D6D
	Type	4-stroke diesel engine with water cooling, direct injection and charged air cooler
	Flywheel horsepower: Net Gross	107 kW (145 ps / 143 hp) at 1,900 rpm
		119 kW (162 ps / 159 hp) at 1,900 rpm
	Max. torque	647 N·m at 1,425 rpm
Fuel tank capacity	350 l	
Hydraulic system	Type	Variable displacement axial piston pump x 2, Gear pump x 1
	System pressure	<ul style="list-style-type: none"> <li>• 32.4 / 34.3 Mpa (330 / 350 kg/cm<sup>2</sup>)</li> <li>• Arm-in, bucket: 27.0 Mpa (275 kg/cm<sup>2</sup>)</li> </ul>
	Max. flow rate	2 x 200 l/min
Performance	Swing speed	11.6 rpm
	Travel speed (1st / 2nd)	3.2 / 5.5 km/h
	Gradeability	35° (70%)
	Max. tractive effort	183 kN (18,700 kg)
	Ground pressure	36 kPa (0.37 kg/cm <sup>2</sup> )
Counterweight		4,900 kg

### • EC240B LR

Description		Specification
Operating weight		27,570 kg
Bucket capacity: SAE / CECE		520 l / 450 l
Engine	Model	VOLVO D7D
	Type	4-stroke diesel engine with water cooling, direct injection and charged air cooler
	Flywheel horsepower: Net Gross	125 kW (170 ps / 168 hp) at 2,000 rpm
		134 kW (182 ps / 180 hp) at 2,000 rpm
	Max. torque	750 N·m at 1,400 rpm
Fuel tank capacity	380 l	
Hydraulic system	Type	Variable displacement axial piston pump x 2, Gear pump x 1
	System pressure	<ul style="list-style-type: none"> <li>• 31.4 / 34.3 Mpa (320 / 350 kg/cm<sup>2</sup>)</li> <li>• Arm-in, bucket: 27.0 Mpa (275 kg/cm<sup>2</sup>)</li> </ul>
	Max. flow rate	2 x 230 l/min
Performance	Swing speed	11.4 rpm
	Travel speed (1st / 2nd)	3.2 / 5.5 km/h
	Gradeability	35° (70%)
	Max. tractive effort	209 kN (21,280 kg)
	Ground pressure	41 kPa (0.42 kg/cm <sup>2</sup> )
Counterweight		6,600 kg

## SPECIFICATIONS

### • EC290B LR

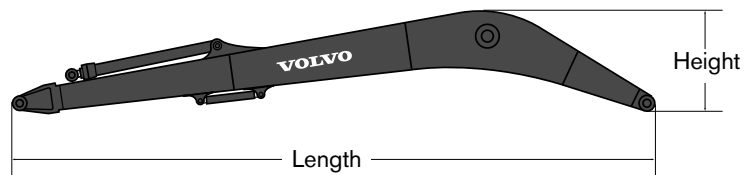
Description		Specification
Operating weight		31,600 kg
Bucket capacity: SAE / CECE		520 l / 450 l, 570 l / 500 l
Engine	Model	VOLVO D7D
	Type	4-stroke diesel engine with water cooling, direct injection and charged air cooler
	Flywheel horsepower: Net	143 kW (195 ps / 192 hp) at 1,900 rpm
	Gross	153 kW (208 ps / 205 hp) at 1,900 rpm
	Max. torque	940 N·m at 1,400 rpm
Fuel tank capacity		470 l
Hydraulic system	Type	Variable displacement axial piston pump x 2, Gear pump x 1
	System pressure	• 31.4 / 34.3 Mpa (320 / 350 kg/cm <sup>2</sup> ) • Bucket: 27.5 Mpa (280 kg/cm <sup>2</sup> )
	Max. flow rate	2 x 250 l/min
Performance	Swing speed	10.2 rpm
	Travel speed (1st / 2nd)	3.3 / 5.2 km/h
	Gradeability	35° (70%)
	Max. tractive effort	231 kN (23,500 kg)
	Ground pressure	45 kPa (0.46 kg/cm <sup>2</sup> )
Counterweight		7,150 kg

## DIMENSIONS

### • Boom

Description	EC210B LR	EC240B LR	EC290B LR
		8.85 m boom	10.2 m boom
Length	9,060 mm	10,410 mm	10,430 mm
Height	1,540 mm	1,550 mm	1,620 mm
Width	670 mm	730 mm	770 mm
Weight	2,330 kg	2,820 kg	3,400 kg

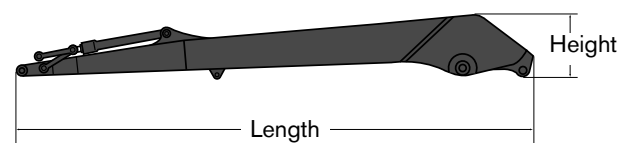
\* Includes cylinder, pin and piping



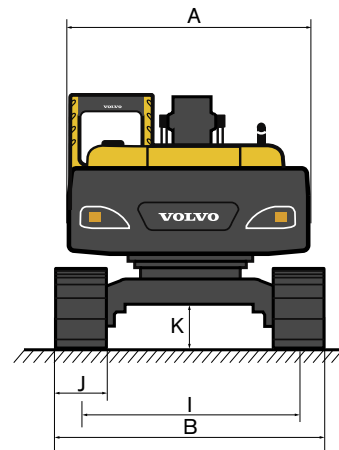
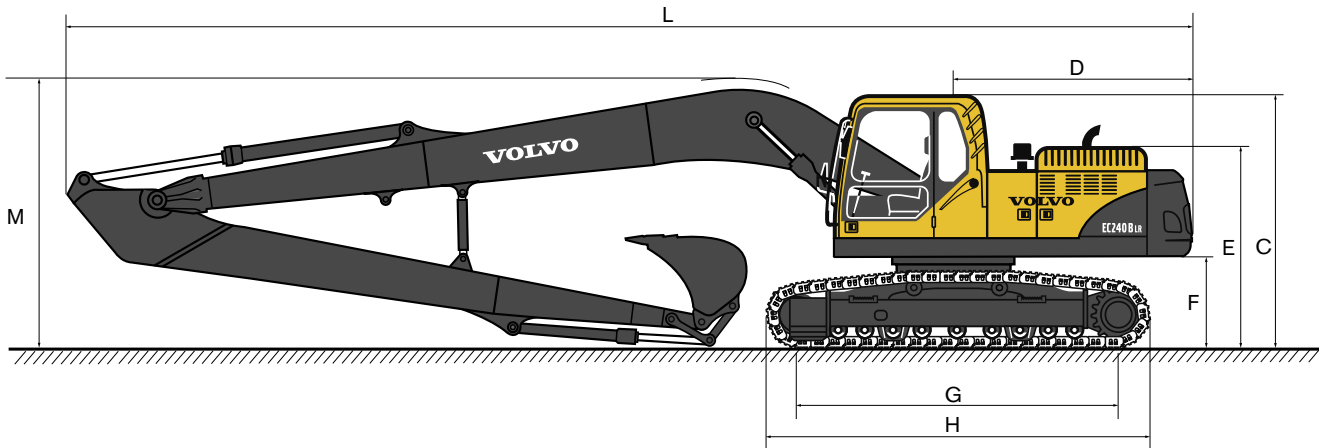
### • Arm

Description	EC210B LR	EC240B LR	EC290B LR
		6.25 m arm	7.85 m arm
Length	7,310 mm	8,970 mm	9,060 mm
Height	870 mm	1,145 mm	1,065 mm
Width	350 mm	380 mm	545 mm
Weight	1,170 kg	1,520 kg	1,790 kg

\* Includes cylinder, linkage and pin



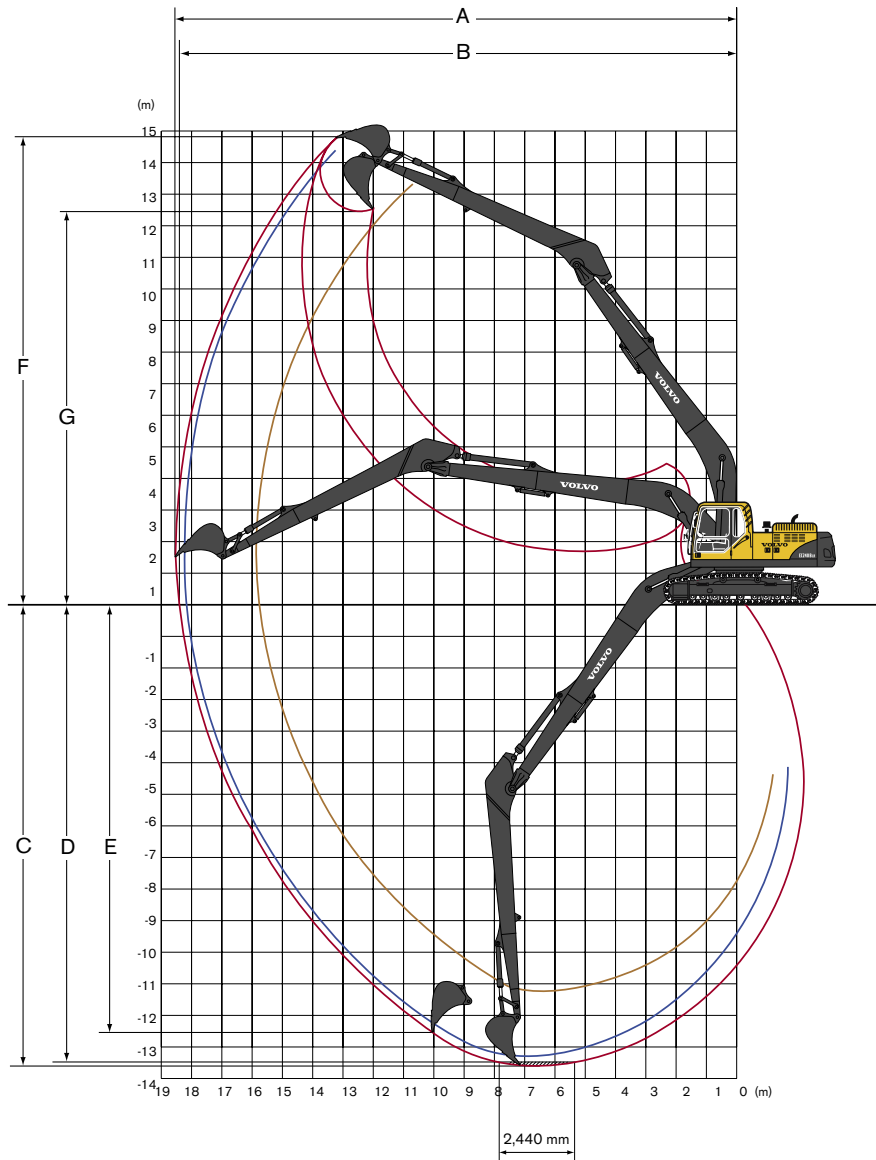
## DIMENSIONS



Description	Unit	EC210B LR	EC240B LR	EC290B LR
A. Overall width of superstructure	mm	2,700	2,840	2,890
B. Overall width	mm	3,190	3,390	3,390
C. Overall height of cab	mm	2,930	2,990	3,030
D. Tail swing radius	mm	2,750	2,880	2,970
E. Overall height of engine hood	mm	2,330	2,390	2,435
F. Counterweight clearance *	mm	1,025	1,080	1,125
G. Tumbler length	mm	3,660	3,850	4,015
H. Track length	mm	4,460	4,650	4,870
I. Track gauge	mm	2,390	2,590	2,590
J. Shoe width	mm	800	800	800
K. Min. ground clearance *	mm	460	470	480
L. Overall length	mm	12,810	14,390	14,590
M. Overall height of boom	mm	3,150	3,170	3,340

\* Without shoe grouser

## WORKING RANGES & DIGGING FORCES



### • Direct fit bucket

Description	Unit	EC210B LR	EC240B LR	EC290B LR
		8.85 m Boom / 6.25 m Arm	10.2 m Boom / 7.85 m Arm	10.2 m Boom / 7.9 m Arm
A. Max. digging reach	mm	15,809	18,307	18,600
B. Max. digging reach on ground	mm	15,707	18,207	18,490
C. Max. digging depth	mm	12,105	14,347	14,770
D. Max. digging depth (2.44 m level)	mm	11,998	14,233	14,670
E. Max. vertical wall digging depth	mm	11,184	12,783	13,520
F. Max. cutting height	mm	13,302	14,891	14,920
G. Max. dumping height	mm	10,947	12,579	12,580



















### • Digging forces with direct fit bucket

Description	Unit	EC210B LR	EC240B LR	EC290B LR
Bucket radius	mm	1,250	1,250	1,250
Breakout force-bucket	SAE kN / kg	68.6 / 7,000	68.6 / 7,000	69.1 / 7,050
Breakout force-bucket	ISO kN / kg	77.8 / 7,930	77.8 / 7,930	80.3 / 8,190
Tearout force-arm	SAE kN / kg	44.1 / 4,500	44.1 / 4,500	64.2 / 6,550
Tearout force-arm	ISO kN / kg	44.7 / 4,560	44.7 / 4,560	65.1 / 6,640
Rotation angle, bucket	deg	179	179	179


















## LIFTING CAPACITY (At the arm and without bucket)

Note: For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick fit from the following values.

### EC210B LR

 Across undercarriage  Along undercarriage	Lifting hook related to ground level	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12 m		13.5 m		Max. reach				
																		Max. mm		
with 800 mm shoe 4,900 kg CWT boom 8.85 m + arm 6.25 m	12.0 m kg																*860	*860	10,290	
	10.5 m kg																	*790	*790	11,610
	9.0 m kg												*1,420	*1,420				*750	*750	12,610
	7.5 m kg										*2,110	*2,110	*2,000	1,960				*730	*730	13,370
	6.0 m kg										*2,260	*2,260	*2,200	1,900	*1,300	*1,300		*730	*730	13,920
	4.5 m kg									*2,660	*2,660	*2,460	2,340	*2,330	1,820	*1,760	1,430	*740	*740	14,290
	3.0 m kg	*5,920	*5,920	*4,320	*4,320	*3,500	*3,500	*3,010	2,830	*2,700	2,190	*2,480	1,730	*2,100	1,370		*760	*760	14,500	
	1.5 m kg	*5,890	*5,890	*5,230	4,600	*4,060	3,400	*3,380	2,610	*2,950	2,050	*2,650	1,630	2,210	1,310		*810	*810	14,550	
	0 m kg	*4,160	*4,160	*5,960	4,160	*4,550	3,110	*3,720	2,410	3,170	1,920	2,590	1,550	2,150	1,260		*870	*870	14,440	
	-1.5 m kg	*4,160	*4,160	*6,420	3,890	4,910	2,900	3,800	2,270	3,060	1,810	2,520	1,480	2,110	1,210		*950	*950	14,170	
	-3.0 m kg	*4,690	*4,690	6,600	3,760	4,770	2,780	3,700	2,170	2,980	1,740	2,470	1,430	*1,620	1,190		*1,070	*1,070	13,740	
	-4.5 m kg	*5,480	*5,480	6,560	3,720	4,720	2,730	3,650	2,120	2,940	1,710	2,450	1,410				*1,250	1,250	13,110	
	-6.0 m kg	*6,510	5,800	*6,470	3,760	4,730	2,740	3,650	2,120	2,950	1,720	*2,340	1,440				*1,510	1,400	12,270	
	-7.5 m kg	*7,830	5,980	*6,060	3,870	4,800	2,810	3,710	2,180	3,020	1,780						*1,960	1,650	11,160	
	-9.0 m kg	*6,870	6,250	*5,340	4,050	*4,270	2,940	*3,400	2,310								*2,900	2,110	9,690	
	-10.5 m kg	*5,250	*5,250	*4,100	*4,100	*3,130	*3,130										*3,030	*3,030	7,650	
-12.0 m kg																				

### EC240B LR



 Across undercarriage  Along undercarriage	Lifting hook related to ground level	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12 m		13.5 m		Max. reach				
																	Max. mm			
with 800 mm shoe 6,600 kg CWT boom 10.2 m + arm 7.85 m	12.0 m kg														*1,020	*1,020	*870	*870	13,700	
	10.5 m kg															*1,550	*1,550	*840	*840	14,700
	9.0 m kg															*1,870	*1,870	*820	*820	15,490
	7.5 m kg												*2,140	*2,140	*2,110	*2,110		*820	*820	16,100
	6.0 m kg												*2,310	*2,310	*2,220	2,110		*830	*830	16,550
	4.5 m kg										*2,700	*2,700	*2,510	*2,510	*2,360	2,010		*860	*860	16,850
	3.0 m kg	*6,930	*6,930	*5,020	*5,020	*4,020	*4,020	*3,420	*3,420	*3,020	2,960	*2,730	2,360	*2,530	1,890		*890	*890	17,020	
	1.5 m kg	*5,130	*5,130	*6,130	6,070	*4,710	4,480	*3,880	3,5460	*3,340	2,730	*2,960	2,190	*2,690	1,780		*940	*940	17,050	
	0 m kg	*3,500	*3,500	*7,020	5,390	*5,320	4,040	*4,300	3,150	*3,640	2,520	*3,190	2,040	2,730	1,670		*1,010	*1,010	16,940	
	-1.5 m kg	*3,380	*3,380	*6,290	4,960	*5,780	3,710	*4,650	2,910	3,810	2,340	3,140	1,910	2,630	1,570		*1,100	1,060	16,710	
	-3.0 m kg	*3,700	*3,700	*5,990	4,720	5,870	3,500	4,550	2,740	3,670	2,210	3,030	1,810	2,550	1,500		*1,220	1,080	16,330	
	-4.5 m kg	*4,220	*4,220	*6,270	4,620	5,750	3,380	4,440	2,630	3,580	2,120	2,960	1,740	2,500	1,450		*1,380	1,130	15,790	
	-6.0 m kg	*4,880	*4,880	*6,890	4,610	5,700	3,350	4,390	2,590	3,530	2,080	2,930	1,710	2,480	1,440		*1,610	1,220	15,090	
	-7.5 m kg	*5,670	*5,670	*7,740	4,680	5,730	3,370	4,400	2,590	3,540	2,080	2,940	1,720	2,510	1,460		*1,950	1,370	14,190	
	-9.0 m kg	*6,620	*6,620	*7,280	4,820	5,830	3,460	4,460	2,660	3,590	2,130	3,000	1,770				*2,500	1,590	13,060	
	-10.5 m kg	*7,790	*7,790	*6,570	5,020	*5,310	3,600	*4,380	2,770	*3,630	2,240						*3,110	1,970	11,630	
-12.0 m kg	*6,940	*6,940	*5,490	5,320	*4,460	3,840	*3,610	2,980								*3,210	2,680	9,760		

- 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 (At the arm and without bucket)

Note: For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick fit from the following values.

### EC290B LR

 Across undercarriage  Along undercarriage	Lifting hook related to ground level	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12 m		13.5 m		Max. reach		Max. mm		
with 800 mm shoe 7,150 kg CWT boom 10.2 m + arm 7.9 m	12.0 m kg														*1,630	*1,630	*1,080	*1,080	14,120	
	10.5 m kg														*2,170	*2,170	*1,040	*1,040	15,080	
	9.0 m kg														*2,510	*2,510	*1,020	*1,020	15,840	
	7.5 m kg														*2,720	2,630	*1,010	*1,010	16,420	
	6.0 m kg													*2,990	*2,990	*2,850	2,520	*1,020	*1,020	16,850
	4.5 m kg										*3,490	*3,490	*3,220	3,000	*3,010	2,390	*1,040	*1,040	17,140	
	3.0 m kg					*5,170	*5,170	*4,380	*4,380	*3,850	3,520	*3,470	2,800	*3,190	2,250	*1,080	*1,080	17,300		
	1.5 m kg	*7,250	*7,250	*7,700	7,130	*5,950	5,280	*4,900	4,080	*4,210	3,230	*3,730	2,600	*3,380	2,100	*1,130	*1,130	17,320		
	0 m kg	*5,150	*5,150	*8,660	6,280	*6,600	4,730	*5,360	3,700	*4,540	2,960	*3,970	2,400	3,380	1,960	*1,200	1,190	17,210		
	-1.5 m kg	*5,070	*5,070	*9,260	5,720	*7,090	4,310	*5,730	3,390	4,710	2,730	3,880	2,230	3,250	1,840	*1,290	1,180	16,960		
	-3.0 m kg	*5,600	*5,600	*8,940	5,380	7,220	4,020	5,600	3,160	4,520	2,550	3,740	2,090	3,140	1,730	*1,410	1,200	16,580		
	-4.5 m kg	*6,410	*6,410	*9,440	5,210	7,030	3,840	5,430	3,000	4,380	2,420	3,630	1,990	3,070	1,660	*1,580	1,250	16,040		
	-6.0 m kg	*7,440	*7,440	*9,470	5,150	6,930	3,760	5,340	2,920	4,300	2,350	3,570	1,940	3,030	1,620	*1,810	1,340	15,340		
	-7.5 m kg	*8,680	8,070	*9,090	5,180	6,920	3,750	5,310	2,900	4,280	2,330	3,560	1,920	3,030	1,620	*2,140	1,480	14,450		
	-9.0 m kg	*10,180	8,290	*8,470	5,300	*6,830	3,810	5,360	2,940	4,310	2,360	3,600	1,960			*2,660	1,710	13,330		
	-10.5 m kg	*9,610	8,620	*7,540	5,500	*6,130	3,950	*5,070	3,040	*4,200	2,460					*3,420	2,100	11,910		
	-12.0 m kg	*7,720	*7,720	*6,170	5,800	*5,030	4,190	*4,080	3,250							*3,410	2,810	10,080		

- 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.

## STANDARD EQUIPMENT

### Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler  
3-stage air filter with indicator, and pre-cleaner  
Air intake heater  
Electric engine shut-off  
Fuel filter and water separator  
Coolant filter  
Alternator, 80A

### Electric / Electronic control system

Contronics:  
- Advanced mode control system  
- Self-diagnostic system  
Machine status indication  
Engine speed sensing power control "Power Max" mode system  
Automatic idling system  
One-touch power boost  
Automatic engine warm-up  
Safety stop/start function

Adjustable monitor  
Master switch  
Engine restart prevention circuit  
High capacity halogen lights:  
- Frame mounted 2  
- Boom mounted 2  
Batteries:  
- EC210B LR: 2 x 12 V / 150 Ah  
- EC240B LR: 2 x 12 V / 200 Ah  
- EC290B LR: 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  
Boom and arm regeneration valves  
Swing anti-rebound valves  
Boom and arm holding valves  
Multi-stage filtering system  
Cylinder cushions  
Cylinder contamination seals  
Auxiliary hydraulic valve

Straight travel circuit  
Automatic two-speed travel motors  
Hydraulic oil, ISO VG 46

### Superstructure

Access way with handrail  
Tool storage area  
Punched metal anti-slip plates  
Full height counterweight

### Cab and interior

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  
- Tinted glass  
- Door locks  
- Floor mat  
- Horn

- Large storage area  
- Pull-up type front window  
- Removable lower windshield  
- Seat belt  
- Safety glass  
- 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

### Track shoes

800 mm track shoes with triple grousers

### Service

Spare parts

## ALTERNATIVE EQUIPMENT

### Engine

Block heater, 120 V / 240 V  
Fuel filler pump: 35 l/min, 50 l/min with automatic shut-off

### Hydraulic system

Pilot-operated wrist control joysticks:  
- Semi-long joysticks  
- Control joystick, with 3 switches each  
- Control joystick, with 5 switches each

### Cab and interior

Seat:  
- Fabric seat  
- Fabric seat, with heater  
- Fabric seat, with heater and air suspension

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

### Engine

Diesel coolant heater  
Oil bath pre-cleaner  
Tropical cooling kit

### Electric

Extra lamps:  
- Cab-mounted 3, (front 2, rear 1)  
- Counterweight-mounted 1  
Overload warning device  
Rotating warning beacon  
Travel alarm

### Hydraulic system

Hose rupture valve: boom, arm  
Hydraulic oil, ISO VG 32  
Hydraulic oil, ISO VG 68  
Hydraulic oil, biodegradable 32  
Hydraulic oil, biodegradable 46

### Superstructure

Undercover (heavy duty 4.5 mm)

### Cab and interior

Air-conditioner, manual  
Heater & air-conditioner, automatic  
Falling object guard (FOG)  
Cab mounted falling object protective structures (FOPS)  
Rain shield, front  
Sun shield, front, roof, rear  
Sunlight protection, roof (steel)  
Safety screen for front window  
Lower wiper  
Anti-vandalism kit  
Specific key

### Digging equipment

Long last bushing

### Undercarriage

Full track guards  
Undercover (heavy duty 10 mm)

### Track shoes

900 mm track shoes with triple grousers

### Service

Hand lamp  
Spare parts  
Tool kit:  
- Full scale  
- Daily maintenance

*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

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EXC