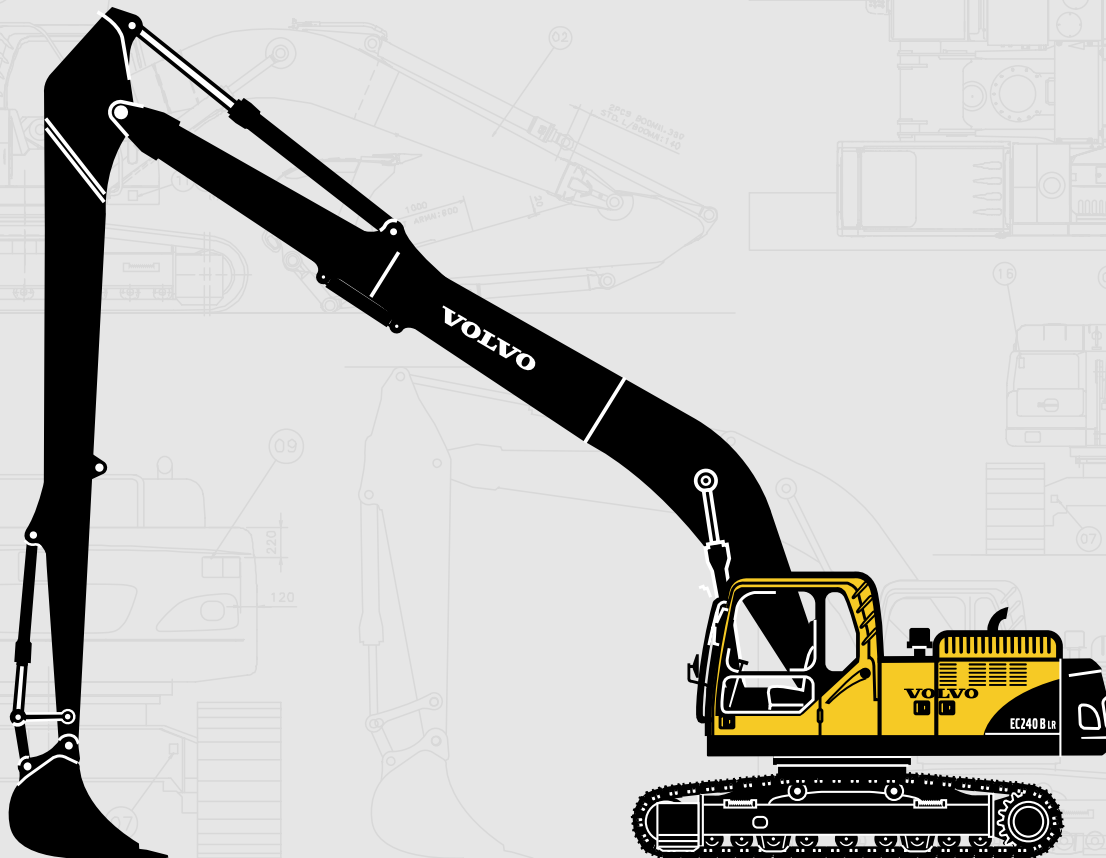


VOLVO EXCAVATORS

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, max. (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 meets EU Step 2 requirements
- Contronic, electronically controlled advanced mode selection 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
 - Low sound level
 - Filtered air
 - Hydraulic dampening mounts
- Developed for use in dredging, ditch cleaning, bank sloping and land leveling
- Long undercarriage for good stability
- Auxiliary hydraulic valve as 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 EFE2
	Type	4-stroke diesel engine with water cooling, direct injection and charged air cooler
	Flywheel horsepower: Net	107 kW (145 ps / 143 hp) at 1 900 rpm
	Gross	119 kW (162 ps / 159 hp) at 1 900 rpm
	Max. torque	647 Nm at 1 425 rpm
Fuel tank capacity		350 l
Hydraulic system	Type	2 x variable displacement axial piston pump, 1 x gear pump
	System pressure	• 32,4 / 34,3 Mpa • Arm-in, bucket: 27,0 Mpa
	Max. flow rate	2 x 200 l/min
Performance	Slew speed	11,6 rpm
	Travel speed (1st / 2nd)	3,2 / 5,5 km/h
	Gradeability	35° (70%)
	Max. tractive effort	183 kN
	Ground pressure	36 kPa
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 EEE2
	Type	4-stroke diesel engine with water cooling, direct injection and charged air cooler
	Flywheel horsepower: Net	125 kW (170 ps / 168 hp) at 2 000 rpm
	Gross	134 kW (182 ps / 180 hp) at 2 000 rpm
	Max. torque	750 Nm at 1 400 rpm
Fuel tank capacity		380 l
Hydraulic system	Type	2 x variable displacement axial piston pump, 1 x gear pump
	System pressure	• 31,4 / 34,3 Mpa • Arm-in, bucket: 27,0 Mpa
	Max. flow rate	2 x 230 l/min
Performance	Slew speed	11,4 rpm
	Travel speed (1st / 2nd)	3,2 / 5,5 km/h
	Gradeability	35° (70%)
	Max. tractive effort	209 kN
	Ground pressure	41 kPa
Counterweight		6 600 kg

SPECIFICATIONS

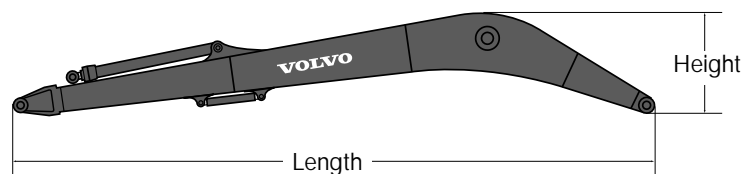
• EC290B LR

Description		Specification
Operating weight		31 600 kg
Bucket capacity: SAE / CECE		520 l / 450 l, 570 l / 500 l
Engine	Model	VOLVO D7D ECE2
	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 Nm at 1 400 rpm
Fuel tank capacity		470 l
Hydraulic system	Type	2 x variable displacement axial piston pump, 1 x gear pump
	System pressure	• 31,4 / 34,3 Mpa • Bucket: 27,5 Mpa
	Max. flow rate	2 x 250 l/min
Performance	Slew speed	10,2 rpm
	Travel speed (1st / 2nd)	3,3 / 5,2 km/h
	Gradeability	35° (70%)
	Max. tractive effort	231 kN
	Ground pressure	45 kPa
Counterweight		7 150 kg

DIMENSIONS

• Boom

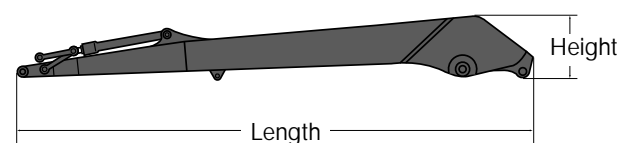
Description	EC210B LR	EC240B LR	EC290B LR
		8,85 m boom	10,2 m boom
Length	9 060 mm	10 410 mm	10 430 mm
Height	1 540 mm	1 550 mm	1 620 mm
Width	670 mm	730 mm	770 mm
Weight	2 330 kg	2 820 kg	3 400 kg



* Includes cylinder, pin and piping

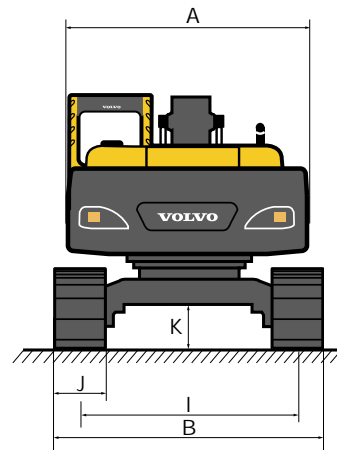
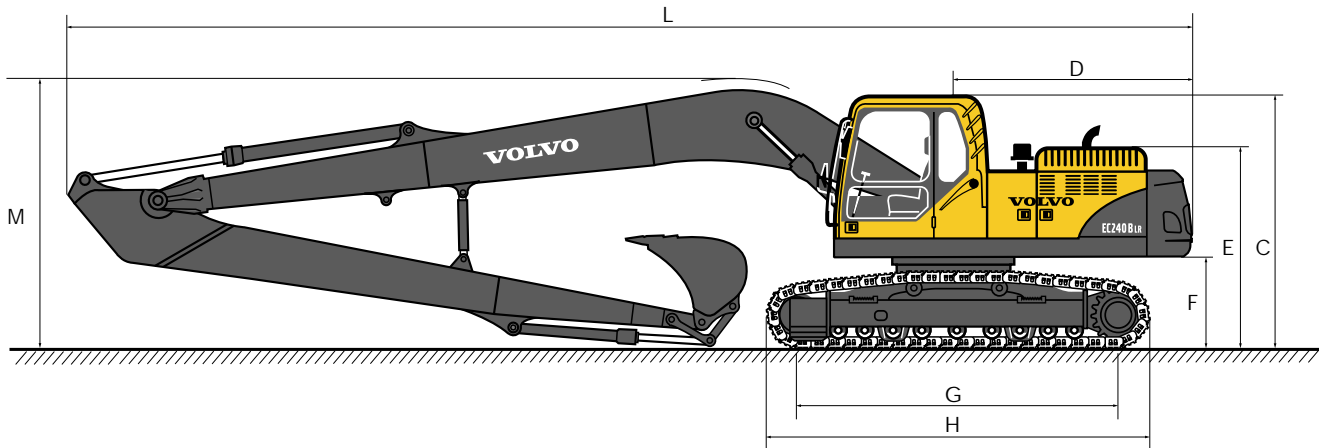
• Arm

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

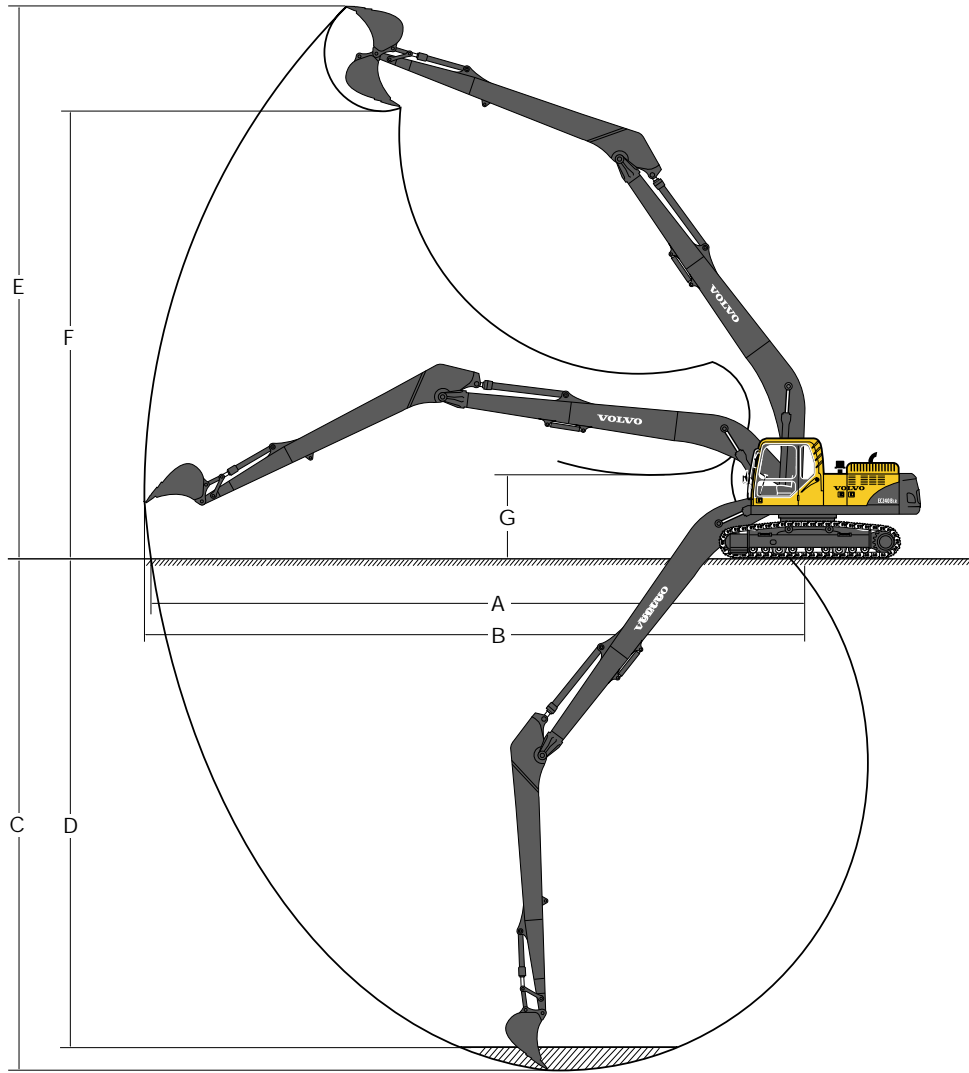
DIMENSIONS



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 slew 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	15 810	18 310	18 600
B. Max. digging reach on ground	mm	15 710	18 210	18 490
C. Max. digging depth	mm	12 100	14 350	14 790
D. Max. digging depth	mm	11 990	14 230	14 690
E. Max. vertical wall digging depth	mm	13 300	14 890	14 900
F. Max. cutting height	mm	10 950	12 580	12 570
G. Min. dumping height	mm	2 050	1 880	1 640



















• 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	SAE kN	68,6	68,6	69,1
Breakout force	ISO kN	77,8	77,8	80,3
Tearout force	SAE kN	44,1	44,1	64,2
Tearout force	ISO kN	44,7	44,7	65,1
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		12,0 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		12,0 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	14 590
	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	2 150		*830	*830	16 550
	4,5 m kg										*2 700	*2 700	*2 510	*2 510	*2 360	2 050	*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	3 020	*2 730	2 400	*2 530	1 930		*890	*890	17 020
	1,5 m kg	*5 130	*5 130	*6 130	*6 130	*4 710	4 560	*3 880	3 520	*3 340	2 780	*2 960	2 240	*2 690	1 820		*940	*940	17 050
	0 m kg	*3 500	*3 500	*7 020	5 490	*5 320	4 120	*4 300	3 220	*3 640	2 570	*3 190	2 090	2 780	1 710		*1 010	*1 010	16 940
	-1,5 m kg	*3 380	*3 380	*6 290	5 060	*5 780	3 790	*4 650	2 970	3 890	2 390	3 210	1 960	2 690	1 610		*1 100	1 090	16 710
	-3,0 m kg	*3 700	*3 700	*5 990	4 820	6 000	3 580	4 650	2 800	3 750	2 260	3 100	1 860	2 610	1 540		*1 220	1 110	16 330
	-4,5 m kg	*4 220	*4 220	*6 270	4 720	5 870	3 460	4 530	2 700	3 660	2 170	3 030	1 790	2 560	1 490		*1 380	1 170	15 790
	-6,0 m kg	*4 880	*4 880	*6 890	4 720	5 830	3 420	4 480	2 650	3 610	2 130	3 000	1 760	2 540	1 480		*1 610	1 260	15 090
	-7,5 m kg	*5 670	*5 670	*7 740	4 780	5 850	3 450	4 490	2 660	3 620	2 130	3 010	1 770	2 570	1 500		*1 950	1 400	14 190
	-9,0 m kg	*6 620	*6 620	*7 280	4 920	*5 840	3 530	4 560	2 720	3 670	2 190	3 060	1 820				*2 500	1 630	13 060
	-10,5 m kg	*7 790	*7 790	*6 570	5 130	*5 310	3 680	*4 380	2 840	*3 630	2 300						*3 110	2 010	11 630
-12,0 m kg	*6 940	*6 940	*5 490	5 420	*4 460	3 910	*3 610	3 040								*3 210	2 730	9 760	

- Notes:
- Machine in "Fine Mode-F" (Power Boost), for lifting capacities.
 - The above loads are in compliance with SAE and ISO 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.

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		12,0 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	*1 130	*1 130	*1 040	*1 040	15 080	
	9,0 m kg											*2 510	*2 510	*1 800	*1 800	*1 020	*1 020	15 840	
	7,5 m kg											*2 720	2 630	*2 220	2 070	*1 010	*1 010	16 420	
	6,0 m kg										*2 990	*2 990	*2 850	2 520	*2 560	2 000	*1 020	*1 020	16 850
	4,5 m kg								*3 490	*3 490	*3 220	3 000	*3 010	2 390	*2 860	1 910	*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	*2 980	1 810	*1 080	*1 080	17 300	
	1,5 m kg	*7 700	7 130	*5 950	5 280	*4 900	4 080	*4 210	3 230	*3 730	2 600	*3 380	2 100	2 950	1 710	*1 130	*1 130	17 320	
	0 m kg	*8 660	6 280	*6 600	4 730	*5 360	3 700	*4 540	2 960	*3 970	2 400	3 380	1 960	2 850	1 610	*1 200	1 190	17 210	
	-1,5 m kg	*9 260	5 720	*7 090	4 310	*5 730	3 390	4 710	2 730	3 880	2 230	3 250	1 840	2 750	1 520	*1 290	1 180	16 960	
	-3,0 m kg	*8 940	5 380	7 220	4 020	5 600	3 160	4 520	2 550	3 740	2 090	3 140	1 730	2 680	1 440	*1 410	1 200	16 580	
	-4,5 m kg	*9 440	5 210	7 030	3 840	5 430	3 000	4 380	2 420	3 630	1 990	3 070	1 660	2 630	1 400	*1 580	1 250	16 040	
	-6,0 m kg	*9 470	5 150	6 930	3 760	5 340	2 920	4 300	2 350	3 570	1 940	3 030	1 620	2 610	1 380	*1 810	1 340	15 340	
	-7,5 m kg	*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	*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	*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	*6 170	5 800	*5 030	4 190	*4 080	3 250									*3 410	2 810	10 080		

- Notes:
1. Machine in "Fine Mode-F" (Power Boost), for lifting capacities.
 2. The above loads are in compliance with SAE and ISO 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.

STANDARD EQUIPMENT

Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets EU Step 2 requirements
3-stage air filter with indicator, including pre-cleaner
Air intake heater
Block heater, 240 V
Electric engine shut-off
Fuel filter and water separator
Coolant filter
Alternator, 80 A

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
Safety stop/start function
Adjustable monitor
Master switch

Engine restart prevention circuit
High capacity halogen lights:
– Frame mounted 2
– Boom mounted 2
Batteries:
– EC210 B: 2 x 12 V / 150 Ah
– EC240 B: 2 x 12 V / 200 Ah
– EC290 B: 2 x 12 V / 200 Ah
Start motor, 24 V / 4,8 kW

Hydraulic system

Automatic hydraulic system:
– Summation system
– Boom priority
– Arm priority
– Slew priority
Boom and arm regeneration valves
Slew anti-rebound valves
Boom and arm holding valves
Multi-stage filtering system
Cylinder cushions
Cylinder contamination seals
Control joystick, with 5 switches each
Auxiliary hydraulic valve
Hose rupture valve: boom
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:
– EC210B: 4 900 kg
– EC240B: 6 600 kg
– EC290B: 7 150 kg
Undercover (4,5 mm)

Cab and interior

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
– 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
Rain shield, front
Sun shield, front, roof, rear
Master ignition key

Undercarriage

Hydraulic track adjusters
Greased and sealed track chain
Track guards
Undercover (heavy duty 10 mm)
LC (Long crawler)

Track shoes

800 mm track shoes with triple grousers

Service

Tool kit, daily maintenance

ALTERNATIVE EQUIPMENT

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
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: arm
Hydraulic oil, ISO VG 32
Hydraulic oil, ISO VG 68
Hydraulic oil, biodegradable 32
Hydraulic oil, biodegradable 46

Cab and interior

Falling object guard (FOG)
Cab mounted falling object protective structures (FOPS)
Sunlight protection, roof (steel)
Safety net for front window
Lower wiper
Anti-vandalism kit
Specific key

Undercarriage

Full track guards

Track shoes

900 mm track shoes with triple grousers

Service

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

Ref. No. 21 B 435 1647
Printed in Korea 2003.05-1
Volvo, Seoul

English, global
KOR