

VOLVO EXCAVATOR

EC360B LC



- **Engine power, gross:**
198 kW 265 hp
- **Operating weight:**
36.5 ~ 38.9 t
80,480 ~ 85,800 lb
- **Buckets (SAE):**
1,600 ~ 3,000 l
2.09 ~ 3.92 yd³
- Turbocharged Volvo diesel engine with direct injection and charged air cooler meets EPA Tier 2 emission standards

- Contronics, Volvo's advanced mode selection system and electronically-controlled system
- Two 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
- Longer undercarriage for excellent stability
- Auxiliary hydraulic valve is standard
- Prepared for a number of optional items

VOLVO



ENGINE

The engine is a turbocharged, 4-stroke diesel engine with water cooling, direct injection and charged air cooler that easily meets EPA Tier 2 emission standards. The engine has been developed especially for excavator use, providing good fuel economy, low noise levels and a long service life.

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	D12C ECE2
Power output at	28 r/s 1,700 rpm
Net (ISO 9249/ SAE J1349)	184 kW 247 hp
Gross (SAE J1995)	198 kW 265 hp
Max. torque	1,353 N·m at 1,275 rpm 998 lb·ft at 1,275 rpm
No. of cylinders	6
Displacement	12.1 l 738 cu.in
Bore	131 mm 5.15"
Stroke	150 mm 5.90"



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 9.7 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)	256.9 kN 57,770 lb
Max. travel speed	3.3/4.5 km/h 2.1/2.8 mph
Gradeability	35° 70%



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



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	215.9 mm 8.5"
Shoe width, triple grouser	600/700/800(Std.)/900 mm 24"/28"/32"(Std.)/36"
Shoe width, double grouser	600 mm 24"
No. of bottom track rollers	2 x 9
No. of top rollers	2 x 2



SERVICE REFILL CAPACITIES

Fuel tank	620 l 164 gal
Hydraulic system, total	500 l 132 gal
Hydraulic tank	220 l 58 gal
Engine oil	41 l 10.8 gal
Engine coolant	65.4 l 17.3 gal
Swing reduction unit	6.0 l 1.6 gal
Travel reduction unit	2 x 5.5 l 2 x 1.5 gal



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 provides 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 280 l/min **2 x 74 gpm**

Pilot pump:

Type Gear pump
Maximum flow 1 x 25.5 l/min **6.7 gpm**

Hydraulic motors:

Travel Variable displacement axial piston motor
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	.....	25.5 Mpa	3,700 psi
Pilot circuit	.....	3.9 Mpa	570 psi

Hydraulic cylinders:

Boom	.....	2
Bore x Stroke	...	ø160 x 1,530 mm
		ø 6.3" x 60.2"
Arm	.....	1
Bore x Stroke	...	ø175 x 1,700 mm
		ø 6.9" x 66.9"
Bucket	.....	1
Bore x Stroke	...	ø145 x 1,285 mm
		ø 5.7" x 50.6"
ME bucket	.....	1
Bore x Stroke	...	ø160 x 1,250 mm
		ø 6.3" x 49.2"



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 73 dB(A)

External sound level
according to ISO 6395
and EU Directive 2000/14/EC LwA 106 dB(A)



GROUND PRESSURE

- Machine with Std. HD 6.45 m, **21' 2"** boom, Std. HD 3.2 m, **10' 6"** arm, 1,460 kg, **3,220 lb** bucket and 6,700 kg, **14,770 lb** counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm 24"	36,500 kg 80,480 lb	65.7 kPa 9.5 psi	3,340 mm 10' 11"
	700 mm 28"	36,940 kg 81,450 lb	56.9 kPa 8.3 psi	3,440 mm 11' 3"
	800 mm 32"	37,370 kg 82,400 lb	51.0 kPa 7.4 psi	3,540 mm 11' 7"
	900 mm 36"	37,810 kg 83,370 lb	46.1 kPa 6.7 psi	3,640 mm 11' 11"
Double grouser	600 mm 24"	36,610 kg 80,730 lb	65.7 kPa 9.5 psi	3,340 mm 10' 11"

- Machine with Std. HD 6.45 m, **21' 2"** boom, Std. HD 3.2 m, **10' 6"** arm, 1,460 kg, **3,220 lb** bucket and 7,250 kg, **15,990 lb** counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm 24"	37,050 kg 81,700 lb	66.7 kPa 9.7 psi	3,340 mm 10' 11"
	700 mm 28"	37,490 kg 82,670 lb	57.9 kPa 8.4 psi	3,440 mm 11' 3"
	800 mm 32"	37,920 kg 83,610 lb	51.0 kPa 7.4 psi	3,540 mm 11' 7"
	900 mm 36"	38,360 kg 84,580 lb	46.1 kPa 6.7 psi	3,640 mm 11' 11"
Double grouser	600 mm 24"	37,160 kg 81,940 lb	66.7 kPa 9.7 psi	3,340 mm 10' 11"

- Machine with Std. HD 6.45 m, **21' 2"** boom, Std. HD 3.2 m, **10' 6"** arm, 1,460 kg, **3,220 lb** bucket and 7,800 kg, **17,200 lb** counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm 24"	37,600 kg 82,910 lb	67.3 kPa 9.8 psi	3,340 mm 10' 11"
	700 mm 28"	38,040 kg 83,880 lb	58.4 kPa 8.5 psi	3,440 mm 11' 3"
	800 mm 32"	38,470 kg 84,830 lb	51.6 kPa 7.5 psi	3,540 mm 11' 7"
	900 mm 36"	38,910 kg 85,800 lb	46.4 kPa 6.7 psi	3,640 mm 11' 11"
Double grouser	600 mm 24"	37,710 kg 83,150 lb	67.5 kPa 9.8 psi	3,340 mm 10' 11"

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 6,700 kg, 14,770 lb

Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"		
		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
GP bucket 1.5 t/m ³ , 2,530 lb/yd ³	l, yd ³	2,875, 3.76	2,700, 3.53	2,500, 3.27	2,275, 2.98
GP bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,500, 3.27	2,375, 3.11	2,175, 2.84	1,975, 2.58
RB bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,300, 3.01	2,175, 2.84	2,000, 2.62	1,825, 2.39
RB bucket 2.0 t/m ³ , 3,370 lb/yd ³	l, yd ³	2,150, 2.81	2,025, 2.65	1,875, 2.45	1,700, 2.22

- Max. permitted sizes for hook-on buckets:
 Counterweight 6,700 kg, 14,770 lb

Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"		
		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
GP bucket 1.5 t/m ³ , 2,530 lb/yd ³	l, yd ³	2,725, 3.56	2,575, 3.37	2,350, 3.07	2,125 2.78
GP bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,375, 3.11	2,250, 2.94	2,050, 2.68	1,875, 2.45
RB bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,200, 2.88	2,075, 2.71	1,900, 2.49	1,725, 2.26
RB bucket 2.0 t/m ³ , 3,370 lb/yd ³	l, yd ³	2,050, 2.68	1,925, 2.52	1,775, 2.32	1,600, 2.09

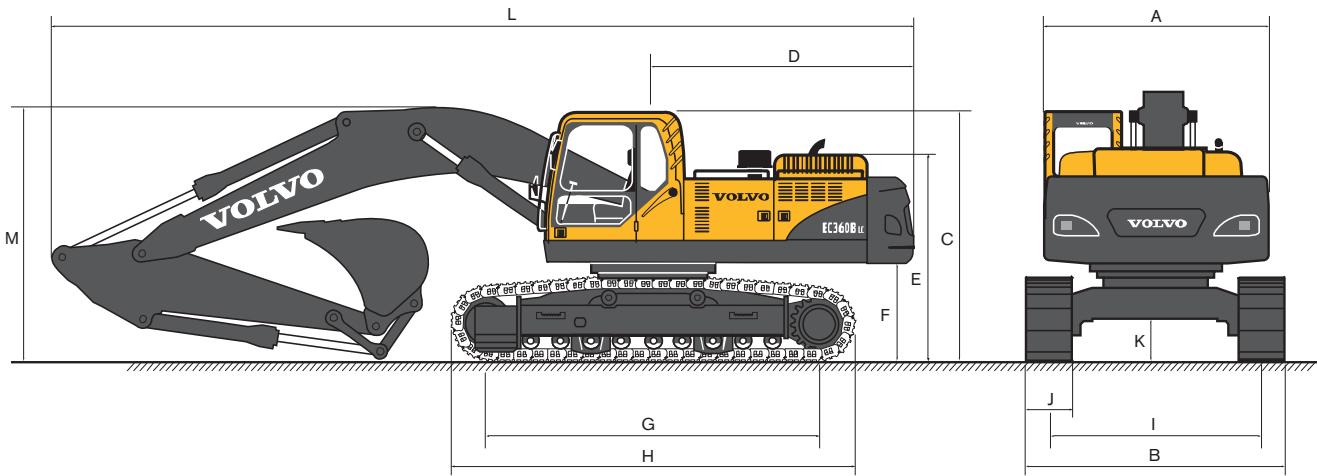
- Max. permitted sizes for pin-on buckets:
 Counterweight 7,250 kg, 15,990 lb/7,800 kg, 17,200 lb

Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"		
		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
GP bucket 1.5 t/m ³ , 2,530 lb/yd ³	l, yd ³	3,000, 3.92	2,825, 3.70	2,600, 3.40	2,375, 3.11
GP bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,625, 3.43	2,475, 3.24	2,275, 2.98	2,075, 2.71
RB bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,425, 3.17	2,300, 3.01	2,100, 2.75	1,925, 2.52
RB bucket 2.0 t/m ³ , 3,370 lb/yd ³	l, yd ³	2,250, 2.94	2,125, 2.78	1,950, 2.55	1,775, 2.32

- Max. permitted sizes for hook-on buckets:
 Counterweight 7,250 kg, 15,990 lb/7,800 kg, 17,200 lb

Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"		
		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
GP bucket 1.5 t/m ³ , 2,530 lb/yd ³	l, yd ³	2,850, 3.73	2,700, 3.53	2,475, 3.24	2,250 2.94
GP bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,500, 3.27	2,375, 3.11	2,175, 2.84	1,950, 2.55
RB bucket 1.8 t/m ³ , 3,030 lb/yd ³	l, yd ³	2,300, 3.01	2,175, 2.84	2,000, 2.62	1,800, 2.35
RB bucket 2.0 t/m ³ , 3,370 lb/yd ³	l, yd ³	2,150, 2.81	2,025, 2.65	1,850, 2.42	1,675, 2.19

DIMENSIONS

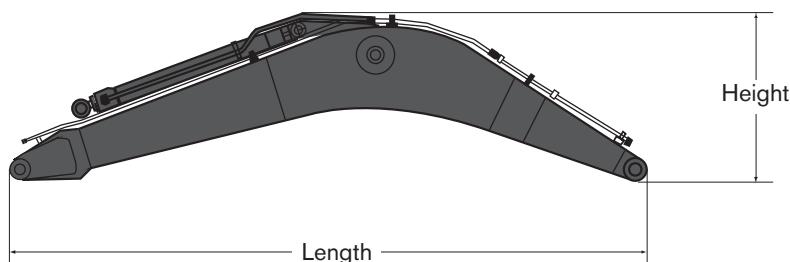


Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"		
Arm		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
A. Overall width of superstructure	mm, ft-in	2,990, 9' 10"	2,990, 9' 10"	2,990, 9' 10"	2,990, 9' 10"
B. Overall width	mm, ft-in	3,540, 11' 7"	3,540, 11' 7"	3,540, 11' 7"	3,540, 11' 7"
C. Overall height of cab	mm, ft-in	3,190, 10' 6"	3,190, 10' 6"	3,190, 10' 6"	3,190, 10' 6"
D. Tail swing radius	mm, ft-in	3,390, 11' 1"	3,390, 11' 1"	3,390, 11' 1"	3,390, 11' 1"
E. Overall height of engine hood	mm, ft-in	2,700, 8' 10"	2,700, 8' 10"	2,700, 8' 10"	2,700, 8' 10"
F. Counterweight clearance *	mm, ft-in	1,210, 4' 0"	1,210, 4' 0"	1,210, 4' 0"	1,210, 4' 0"
G. Tumbler length	mm, ft-in	4,240, 13' 11"	4,240, 13' 11"	4,240, 13' 11"	4,240, 13' 11"
H. Track length	mm, ft-in	5,180, 17' 0"	5,180, 17' 0"	5,180, 17' 0"	5,180, 17' 0"
I. Track gauge	mm, ft-in	2,740, 9' 0"	2,740, 9' 0"	2,740, 9' 0"	2,740, 9' 0"
J. Shoe width	mm, in	800, 32"	800, 32"	800, 32"	800, 32"
K. Min. ground clearance *	mm, ft-in	500, 1' 8"	500, 1' 8"	500, 1' 8"	500, 1' 8"
L. Overall length	mm, ft-in	10,910, 35' 10"	11,160, 36' 7"	11,070, 36' 4"	11,120, 36' 6"
M. Overall height of boom	mm, ft-in	3,700, 12' 2"	3,580, 11' 9"	3,350, 11' 0"	3,590, 11' 9"

* Without shoe grouser

DIMENSIONS

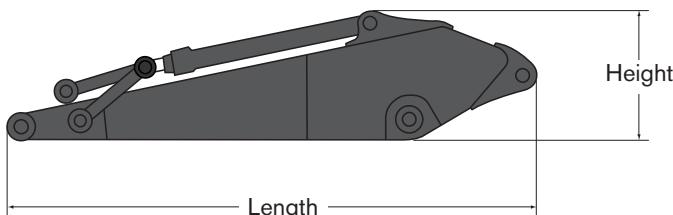
• Boom



Description	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"
Length	6,460 mm, 21' 2"	6,700 mm, 22' 0"
Height	1,740 mm, 5' 9"	1,800 mm, 5' 11"
Width	820 mm, 2' 8"	820 mm, 2' 8"
Weight	3,230 kg, 7,120 lb	3,210 kg, 7,080 lb

* Includes cylinder, pin and piping

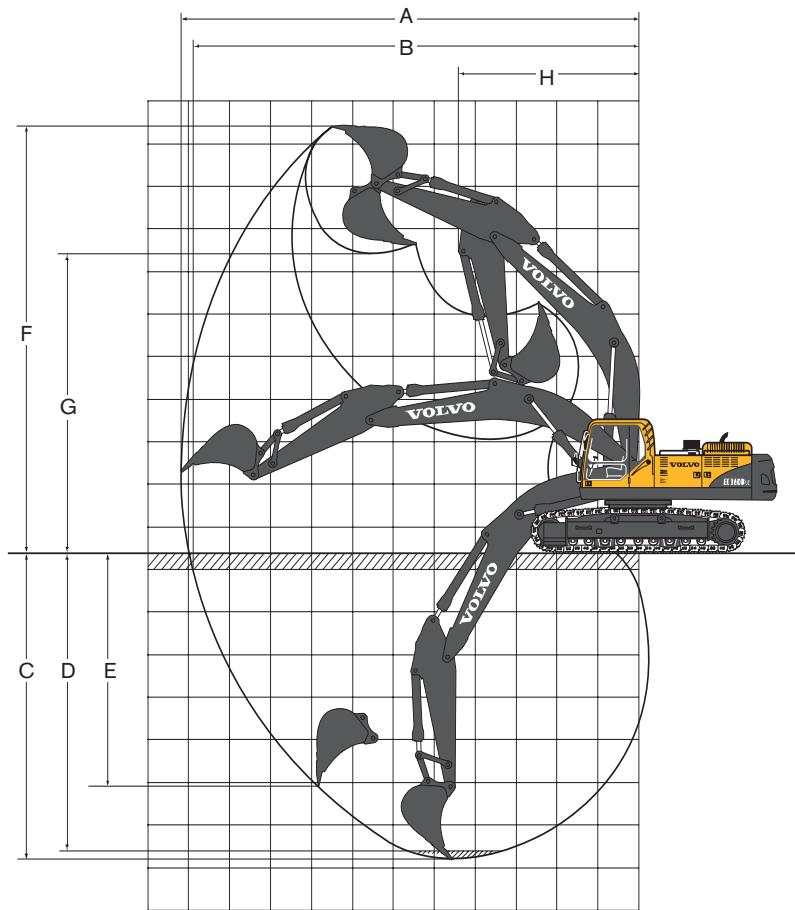
• Arm



Description	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
Length	3,780 mm, 12' 5"	4,360 mm, 14' 4"	5,080 mm, 16' 8"
Height	1,145 mm, 3' 9"	1,145 mm, 3' 9"	1,140 mm, 3' 9"
Width	560 mm, 1' 10"	560 mm, 1' 10"	560 mm, 1' 10"
Weight	1,975 kg, 4,350 lb	2,025 kg, 4,470 lb	2,165 kg, 4,770 lb

* Includes cylinder, piping and linkage

WORKING RANGES & DIGGING FORCES



• Machine with pin-on bucket

Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"		
Arm		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"
A. Max. digging reach	mm, ft-in	10,480, 34' 5"	10,660, 35' 0"	11,180, 36' 8"	11,820, 38' 9"
B. Max. digging reach on ground	mm, ft-in	10,250, 33' 8"	10,440, 34' 3"	10,970, 36' 0"	11,620, 38' 1"
C. Max. digging depth	mm, ft-in	6,720, 22' 1"	6,890, 22' 7"	7,490, 24' 7"	8,200, 26' 11"
D. Max. digging depth (8' level)	mm, ft-in	6,540, 21' 5"	6,690, 21' 11"	7,320, 24' 0"	8,050, 26' 5"
E. Max. vertical wall digging depth	mm, ft-in	4,800, 15' 9"	5,110, 16' 9"	5,510, 18' 1"	6,140, 20' 2"
F. Max. cutting height	mm, ft-in	10,070, 33' 0"	10,160, 33' 4"	10,320, 33' 10"	10,600, 34' 9"
G. Max. dumping height	mm, ft-in	6,830, 22' 5"	7,050, 23' 2"	7,240, 23' 9"	7,520, 24' 8"
H. Min. front swing radius	mm, ft-in	4,180, 13' 9"	4,380, 14' 4"	4,340, 14' 3"	4,320, 14' 2"

• Digging forces with pin-on bucket

Boom	Unit	ME 6.2 m, 20' 4"	Std. HD 6.45 m, 21' 2"			
Arm		2.6 m, 8' 6"	2.6 m, 8' 6"	Std. HD 3.2 m, 10' 6"	3.9 m, 12' 10"	
Bucket tip radius	mm, in	1,810, 71"	1,623, 64"	1,623, 64"	1,623, 64"	
Breakout force – bucket (Normal/Power boost)	SAE	kN lb	208.0/228.0 46,970/51,380	192.0/209.0 43,220/47,190	192.0/209.0 43,220/47,190	192.0/209.0 43,220/47,190
Teatout force – arm (Normal/Power boost)	SAE	kN lb	182.0/200.0 41,010/44,980	190.0/207.0 42,780/46,750	157.0/172.0 35,500/38,810	137.0/150.0 30,870/33,740
Rotation angle, bucket	deg	164°	177°	177°	177°	

STANDARD EQUIPMENT

Engine

Turbocharged, 4-stroke diesel engine with water cooling, direct injection and charged air cooler that meets EPA (Environment Protection Agency) Tier 2 emission standards
3-stage air filter with indicator and precleaner
Air intake heater
Electric engine shut-off
Fuel filter and water separator
Coolant filter
Alternator, 55 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 4
Batteries, 2 x 12 V / 200 Ah
Start motor, 24 V / 6.6 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 cushioning
Cylinder contamination seals
Auxiliary hydraulic valve
Straight travel circuit
Automatic two-speed travel motors
Hydraulic oil, ISO VG 46

Superstructure

Access way with handrail
Full height counterweight
7,800 kg, 17,200 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
– Rain shield, front
– 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")

Track shoes

Track shoes 800 mm, 32" with triple grousers

Digging equipment

Boom: HD 6.45 m, 21' 2"
Arm: HD 3.2 m, 10' 6"

OPTIONAL EQUIPMENT (Standard in certain markets)

Engine

Block heater: 120 V
Oil bath precleaner
Diesel coolant heater
Tropical cooling kit
Fuel filler pump: 50 l/min, 13.2 gpm with automatic shut-off

Electric

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

Hydraulic system

Hose rupture valve: boom, arm
Hydraulic piping
– Hammer & shear:
 1 pump flow
 2 pump flow
 Additional return filter
 Extra piping for slope & rotator
– Slope & rotator
– Grapple
– Oil leak (drain) line
Volvo hydraulic quick-coupler, S3 size
Hydraulic oil, ISO VG 32
Hydraulic oil, ISO VG 68
Hydraulic oil, biodegradable 32
Hydraulic oil, biodegradable 46

Cab and interior

Fabric seat
Control joystick with semi-long levers
Control joystick with 5 switches each
Pilot control pattern change
Air-conditioner, manual
Falling object guard (FOG)
Cab-mounted falling object protective structures (FOPS)
Sunlight protection, roof (steel)
Safety screen for front window
Lower wiper
Anti-vandalism kit
Walk way

Superstructure

Full height counterweight
6,700 kg, 14,770 lb
7,250 kg, 15,990 lb
Hydraulic removable counterweight

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
600 mm, 24" track shoe with double grouser

Digging equipment

Boom: ME 6.2 m, 20' 4"
Arm: 2.6 m, 8' 6"
3.9 m, 12' 10"

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

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