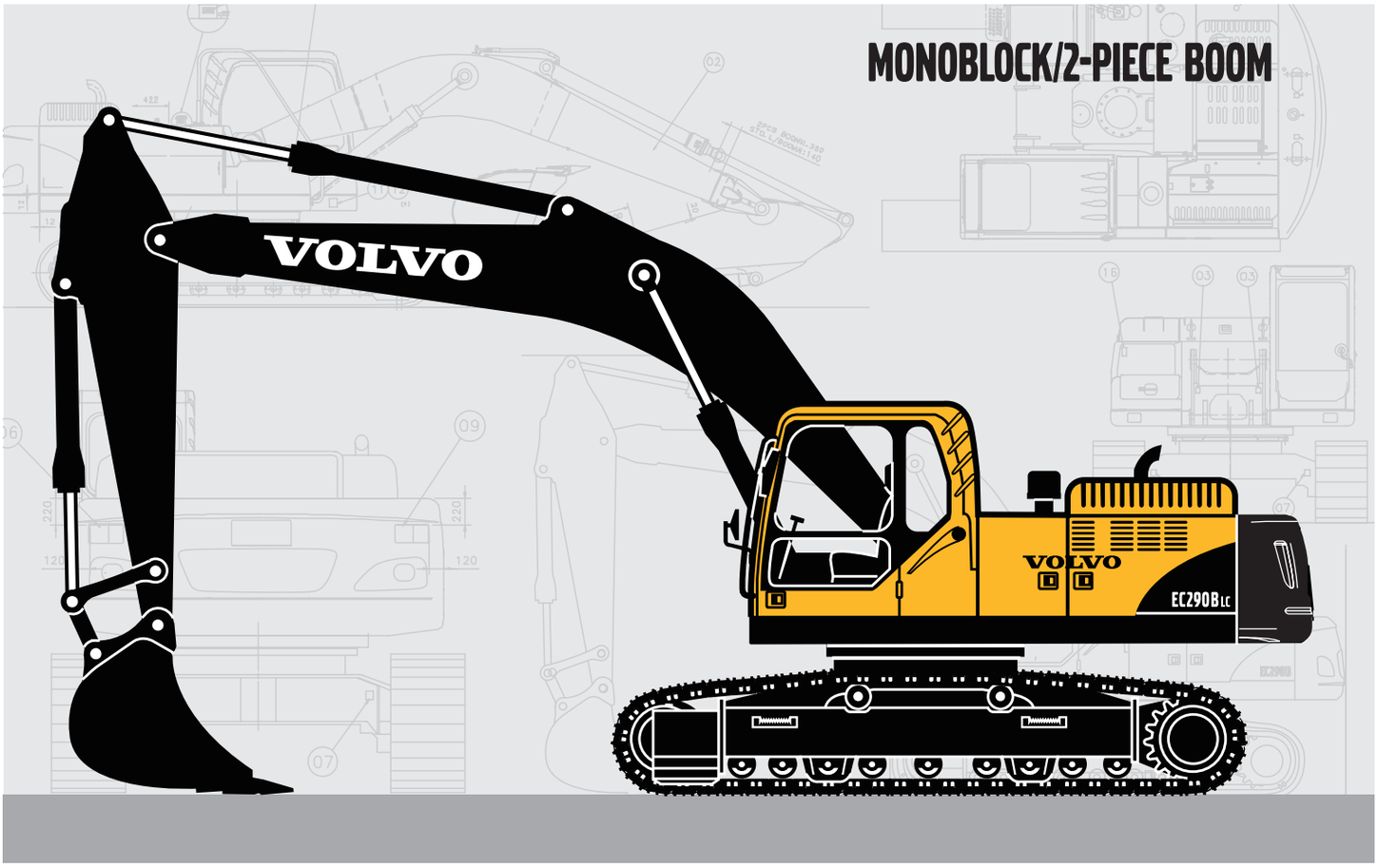
VOLVO EXCAVATOR

EC290B LC
EC290B NLC



- **Engine power, gross: 153 kW (205 hp)**
- **Operating weight: LC: 28.2 ~ 29.9 t NLC: 28.4 ~ 29.7 t**

- Turbocharged Volvo diesel engine with water cooling, 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 "Integrated Work Mode System".
- Cab
  - Ergonomic environment for easier operator use
  - Low sound level
  - Filtered air
  - Hydraulic dampening mounts
- Strong digging equipment, produced by robotic welding
- High lifting, breakout and tearout forces for tough digging conditions
- Undercarriage
  - LC: Long undercarriage for excellent stability
  - NLC: Narrow width for easier transportation
- Auxiliary hydraulic valve is standard
- Prepared for a number of optional items

MORE CARE. BUILT IN.

ENGINE

The engine is a turbocharged, 4-stroke diesel engine with water cooling, direct injection and charged air cooler. This engine has been specifically designed for excavators giving you good fuel economy, low noise emission levels, and a long service life.

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:

Maker	Volvo
Model	D7D
Power output at	32 r/s (1,900 rpm)
Net (ISO 9249/ SAE J1349)	143 kW (195 ps / 192 hp)
Gross (SAE J1995)	153 kW (208 ps / 205 hp)
Max. torque	940 N·m at 1,400 rpm
No. of cylinders	6
Displacement	7.1 l
Bore	108 mm
Stroke	130 mm

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.

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.

LC

No. of track pads	2 x 50
Link pitch	203 mm
Shoe width, triple grouser	600 / 700 / 800 / 900 mm
Shoe width, double grouser	700 mm
No. of bottom rollers	2 x 9
No. of top rollers	2 x 2

NLC

No. of track pads	2 x 48
Link pitch	203 mm
Shoe width, triple grouser	600 / 700 / 800 / 900 mm
No. of bottom rollers	2 x 8
No. of top rollers	2 x 2

HYDRAULIC SYSTEM

The hydraulic system, also known as the "Integrated Work Mode System", 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.

Power Max: All function speeds are increased.

Main pump:

Type	2 x variable displacement axial piston pumps
Maximum flow	2 x 250 l/min

Pilot pump:

Type	Gear pump
Maximum flow	1 x 19 l/min

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 (320 / 350 kg/cm²)
Travel circuit	34.3 Mpa (350 kg/cm²)
Swing circuit	26.5 Mpa (270 kg/cm²)
Pilot circuit	3.9 Mpa (40 kg/cm²)

Hydraulic cylinders:

Monoblock boom	2
Bore x Stroke	ø140 x 1,480 mm
1st boom of 2-piece boom	2
Bore x Stroke	ø140 x 1,480 mm
2nd boom of 2-piece boom	1
Bore x Stroke	ø170 x 1,300 mm
Arm	1
Bore x Stroke	ø150 x 1,745 mm
Bucket	1
Bore x Stroke	ø140 x 1,140 mm

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. tractive effort	230.5 kN (23,500 kg)
Max. travel speed	3.3 / 5.2 km/h
Gradeability	35° (70%)

SERVICE REFILL CAPACITIES

Fuel tank	470 l
Hydraulic system, total	400 l
Hydraulic tank	195 l
Engine oil	32 l
Engine coolant	44 l
Swing reduction unit	11 l
Travel reduction unit	2 x 5.0 l

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 to 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

• **Long crawler machine with** 6.2 m monoblock boom, 3.05 m arm, 1,240 l (975 kg) bucket and 5,400 kg counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm	28,200 kg	53.0 kPa (0.54 kg/cm²)	3,190 mm
	700 mm	28,760 kg	47.1 kPa (0.48 kg/cm²)	3,290 mm
	800 mm	29,130 kg	41.2 kPa (0.42 kg/cm²)	3,390 mm
	900 mm	29,500 kg	37.3 kPa (0.38 kg/cm²)	3,490 mm
Double grouser	700 mm	28,760 kg	46.1 kPa (0.47 kg/cm²)	3,290 mm

• **Long crawler machine with** 6.2 m monoblock boom, 3.05 m arm, 1,240 l (975 kg) bucket and 5,800 kg counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm	28,600 kg	53.9 kPa (0.55 kg/cm²)	3,190 mm
	700 mm	29,160 kg	47.1 kPa (0.48 kg/cm²)	3,290 mm
	800 mm	29,530 kg	42.2 kPa (0.43 kg/cm²)	3,390 mm
	900 mm	29,900 kg	38.2 kPa (0.39 kg/cm²)	3,490 mm
Double grouser	700 mm	29,160 kg	47.1 kPa (0.48 kg/cm²)	3,290 mm

• **Narrow long crawler machine with** 6.2 m monoblock boom, 3.05 m arm, 1,240 l (975 kg) bucket and 5,800 kg counterweight.

Description	Shoe width	Operating weight	Ground pressure	Overall width
Triple grouser	600 mm	28,400 kg	56.9 kPa (0.58 kg/cm²)	2,990 mm
	700 mm	28,960 kg	49.0 kPa (0.50 kg/cm²)	3,090 mm
	800 mm	29,310 kg	44.1 kPa (0.45 kg/cm²)	3,190 mm
	900 mm	29,670 kg	39.2 kPa (0.40 kg/cm²)	3,290 mm

BUCKET & ARM COMBINATION

• Volvo K-GP bucket (straight side)

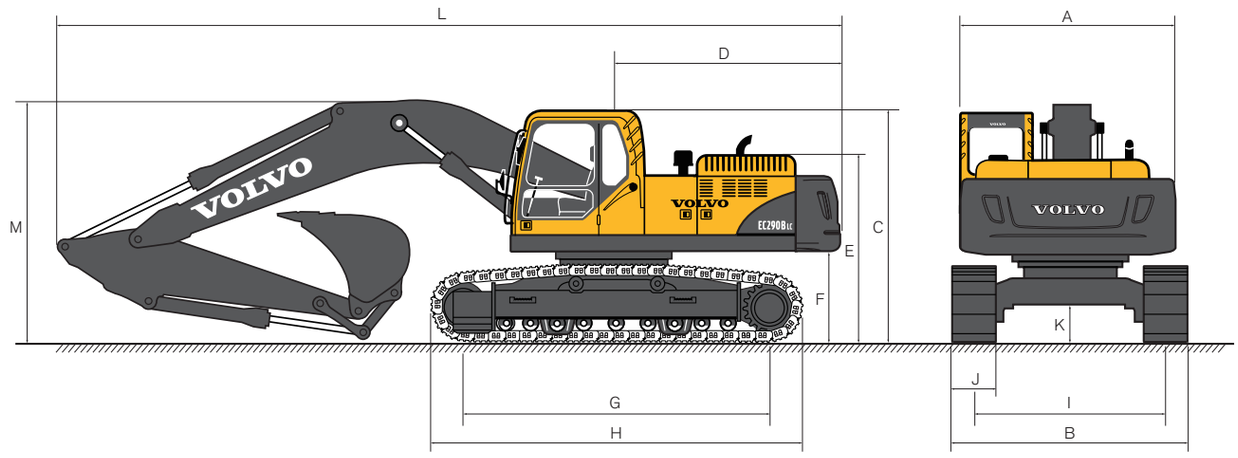
Description			Narrow bucket	Standard bucket	Reinforced bucket	Wide bucket
Bucket capacity	SAE		780 l	1,240 l	1,240 l	1,600 l
	CECE		700 l	1,100 l	1,100 l	1,400 l
Bucket width	with side cutter		956 mm	1,361 mm	1,361 mm	1,651 mm
	without side cutter		846 mm	1,251 mm	1,251 mm	1,541 mm
Weight (with side cutter)			785 kg	975 kg	1,065 kg	1,120 kg
No. of teeth			4	5	5	6
Application			Trenching	General purpose	Extreme service	Loading service
5,400 kg counterweight	Monoblock boom 6.2 m + arm options	2.55 m	A	A	A	C
		3.05 m	A	A	A	C
		4.0 m	A	B	C	D
5,800 kg counterweight	Monoblock boom 6.2 m + arm options	2.55 m	A	A	A	B
		3.05 m	A	A	A	C
		4.0 m	A	B	C	C

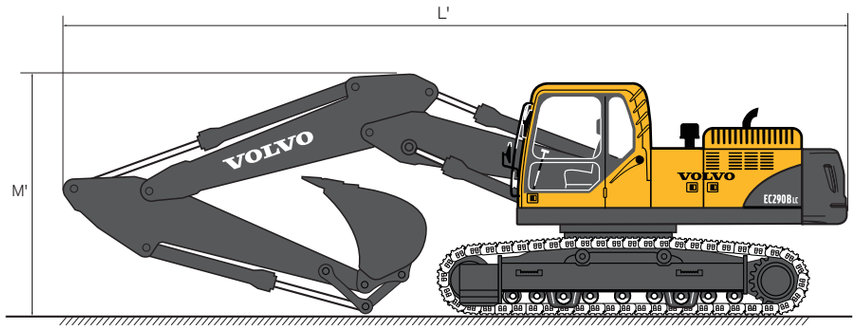
• Volvo HARDOX 400® bucket (curved side)

Description			Direct fit - GP bucket			Quick fit - GP bucket	
Bucket capacity	SAE		1,200 l	1,300 l	1,400 l	1,200 l	1,300 l
	CECE		1,080 l	1,170 l	1,260 l	1,080 l	1,170 l
Bucket width			1,300 mm	1,350 mm	1,450 mm	1,300 mm	1,350 mm
Weight			1,010 kg	1,075 kg	1,115 kg	980 kg	1,045 kg
No. of teeth			4	5	5	4	5
Application			Tough condition	Tough condition	Tough condition	Tough condition	Tough condition
5,400 kg counterweight	Monoblock boom 6.2 m + arm options	2.55 m	A	A	B	A	B
		3.05 m	A	B	C	B	C
		4.0 m	C	C	D	C	D
5,800 kg counterweight	Monoblock boom 6.2 m + arm options	2.55 m	A	A	A	A	A
		3.05 m	A	B	C	B	B
		4.0 m	C	C	C	C	C

A: Applicable for general purpose up to 2,000 kg/m^3
B: Applicable for general purpose up to 1,800 kg/m^3
C: Applicable for general purpose up to 1,500 kg/m^3
D: Applicable for general purpose up to 1,200 kg/m^3

DIMENSIONS



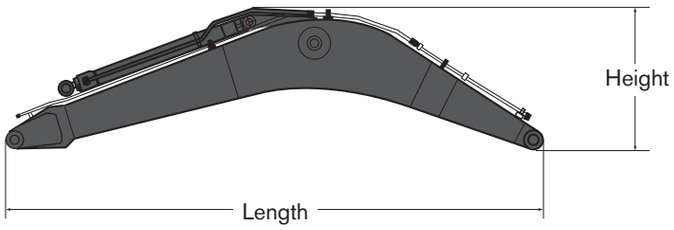


Description	Unit	LC (6.2 m Boom)			NLC (6.2 m Boom)		
		2.55 m Arm	3.05 m Arm	4.0 m Arm	2.55 m Arm	3.05 m Arm	4.0 m Arm
A. Overall width of superstructure	mm	2,890	2,890	2,890	2,890	2,890	2,890
B. Overall width	mm	3,190	3,190	3,190	2,990	2,990	2,990
C. Overall height of cab	mm	3,030	3,030	3,030	3,030	3,030	3,030
D. Tail swing radius	mm	3,050	3,050	3,050	3,050	3,050	3,050
E. Overall height of engine hood	mm	2,450	2,450	2,450	2,450	2,450	2,450
F. Counterweight clearance *	mm	1,145	1,145	1,145	1,145	1,145	1,145
G. Tumbler length	mm	4,015	4,015	4,015	3,810	3,810	3,810
H. Track length	mm	4,870	4,870	4,870	4,665	4,665	4,665
I. Track gauge	mm	2,590	2,590	2,590	2,390	2,390	2,390
J. Shoe width	mm	600	600	600	600	600	600
K. Min. ground clearance *	mm	480	480	480	480	480	480
L. Overall length	mm	10,480	10,400	10,440	10,480	10,400	10,440
L'. Overall length	mm	10,480	10,430	10,400	10,480	10,430	10,400
M. Overall height of boom	mm	3,430	3,290	3,680	3,430	3,290	3,680
M'. Overall height of boom	mm	3,360	3,300	3,730	3,360	3,300	3,730

* Without shoe grouser

DIMENSIONS

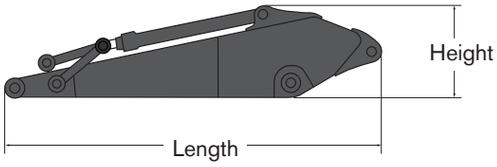
- **Boom**



Description	6.2 m	6.2 m HD	6.2 m 2-piece
Length	6,430 mm	6,430 mm	6,430 mm
Height	1,680 mm	1,680 mm	1,590 mm
Width	770 mm	770 mm	770 mm
Weight	2,470 kg	2,590 kg	2,960 kg

* Includes cylinder, pin and piping

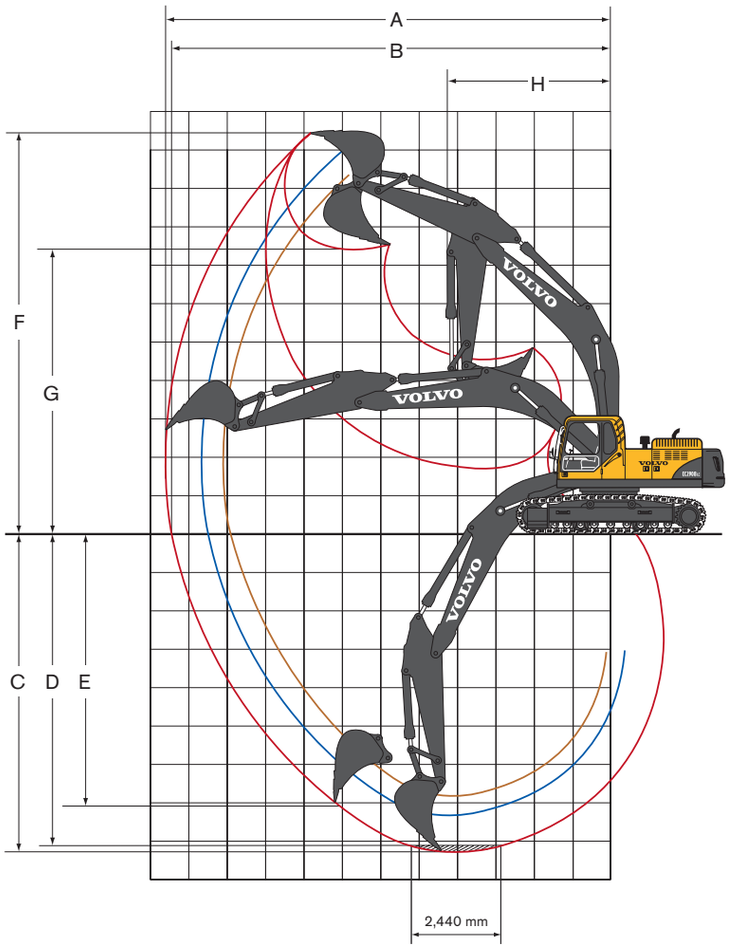
- **Arm**



Description	2.55 m	3.05 m	3.05 m HD	4.0 m
Length	3,710 mm	4,150 mm	4,150 mm	5,100 mm
Height	1,010 mm	1,010 mm	1,010 mm	1,070 mm
Width	545 mm	545 mm	545 mm	545 mm
Weight	1,415 kg	1,490 kg	1,520 kg	1,710 kg

* Includes cylinder, piping and linkage

WORKING RANGES & DIGGING FORCES



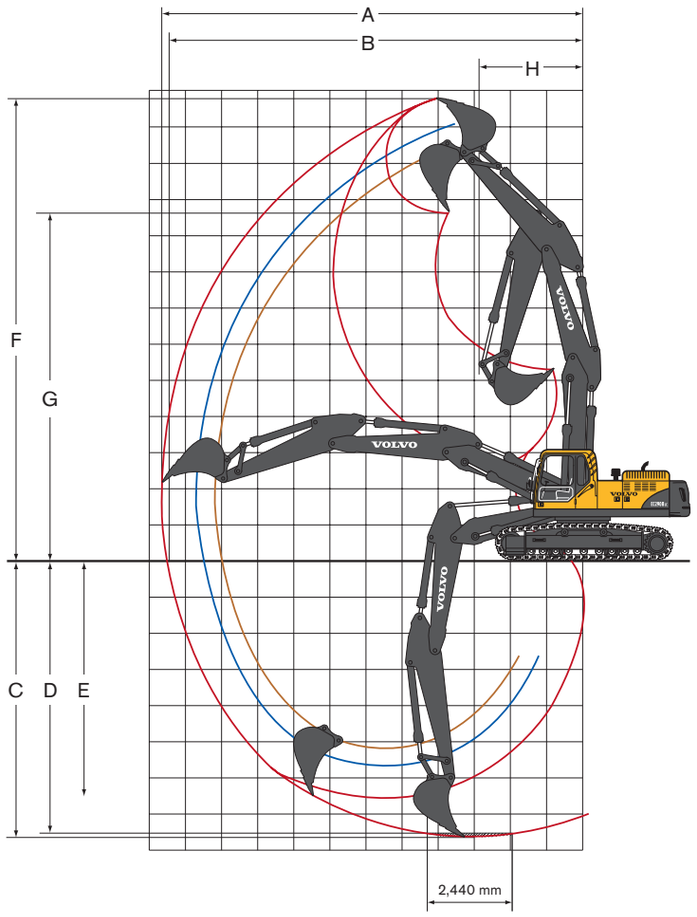
• 6,2 m monoblock boom with direct fit bucket

Description	Unit	6.2 m monoblock boom		
		2.55 m Arm	3.05 m Arm	4.0 m Arm
A. Max. digging reach	mm	10,160	10,690	11,570
B. Max. digging reach on ground	mm	9,950	10,490	11,400
C. Max. digging depth	mm	6,830	7,320	8,280
D. Max. digging depth (2.44 m level)	mm	6,590	7,140	8,130
E. Max. vertical wall digging depth	mm	5,440	6,200	7,110
F. Max. cutting height	mm	9,620	10,040	10,460
G. Max. dumping height	mm	6,690	7,050	7,470
H. Min. front swing radius	mm	4,220	4,180	4,280

• Digging forces with direct fit bucket

Description		Unit	6.2 m monoblock boom		
			2.55 m Arm	3.05 m Arm	4.0 m Arm
Bucket radius		mm	1,600	1,600	1,600
Breakout force – bucket	SAE	kN	157.8 / 172.6	157.8 / 172.6	157.8 / 172.6
(Normal / Power boost)		kg	16,090 / 17,600	16,090 / 17,600	16,090 / 17,600
Breakout force – bucket	ISO	kN	181.4 / 198.4	181.4 / 198.4	181.4 / 198.4
(Normal / Power boost)		kg	18,500 / 20,230	18,500 / 20,230	18,500 / 20,230
Tearout force – arm	SAE	kN	145.0 / 158.7	123.4 / 134.9	102.3 / 111.9
(Normal / Power boost)		kg	14,790 / 16,180	12,580 / 13,760	10,430 / 11,410
Tearout force – arm	ISO	kN	152.9 / 167.2	127.6 / 139.5	105.0 / 114.8
(Normal / Power boost)		kg	15,590 / 17,050	13,010 / 14,230	10,710 / 11,710
Rotation angle, bucket		deg	179	179	179

WORKING RANGES & DIGGING FORCES



• 6,2 m 2-piece boom with direct fit bucket

Description	Unit	6.2 m 2-piece boom		
		2.55 m Arm	3.05 m Arm	4.0 m Arm
A. Max. digging reach	mm	10,220	10,750	11,650
B. Max. digging reach on ground	mm	10,020	10,560	11,480
C. Max. digging depth	mm	6,200	6,720	7,660
D. Max. digging depth (2.44 m level)	mm	6,100	6,630	7,580
E. Max. vertical wall digging depth	mm	4,530	5,640	6,550
F. Max. cutting height	mm	11,550	12,050	12,790
G. Max. dumping height	mm	8,370	8,860	9,600
H. Min. front swing radius	mm	2,750	2,580	2,870

• Digging forces with direct fit bucket

Description		Unit	6.2 m 2-piece boom		
			2.55 m Arm	3.05 m Arm	4.0 m Arm
Bucket radius		mm	1,600	1,600	1,600
Breakout force – bucket	SAE	kN	157.8 / 172.6	157.8 / 172.6	157.8 / 172.6
(Normal / Power boost)		kg	16,090 / 17,600	16,090 / 17,600	16,090 / 17,600
Breakout force – bucket	ISO	kN	181.4 / 198.4	181.4 / 198.4	181.4 / 198.4
(Normal / Power boost)		kg	18,500 / 20,230	18,500 / 20,230	18,500 / 20,230
Tearout force – arm	SAE	kN	145.0 / 158.7	123.4 / 134.9	102.3 / 111.9
(Normal / Power boost)		kg	14,790 / 16,180	12,580 / 13,760	10,430 / 11,410
Tearout force – arm	ISO	kN	152.9 / 167.2	127.6 / 139.5	105.0 / 114.8
(Normal / Power boost)		kg	15,590 / 17,050	13,010 / 14,230	10,710 / 11,710
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.

EC290B LC

Across undercarriage / Along undercarriage	Lifting hook related to ground level		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		
															Max. mm
with 600 mm shoe 5,400 kg CWT boom 6.2 m + arm 2.55 m	6.0 m	kg					*7,670	7,530	*7,490	5,210			*7,500	5,150	7,540
	4.5 m	kg			*10,800	*10,800	*8,710	7,210	*7,790	5,100			7,010	4,430	8,170
	3.0 m	kg			*13,800	10,310	*10,070	6,830	7,880	4,920			6,480	4,060	8,490
	1.5 m	kg			*15,850	9,710	10,810	6,500	7,690	4,750			6,330	3,940	8,540
	0.0 m	kg			*16,420	9,520	10,580	6,300	7,560	4,640			6,520	4,030	8,310
	-1.5 m	kg	*11,580	*11,580	*16,020	9,520	10,520	6,250	7,540	4,620			7,150	4,400	7,780
	-3.0 m	kg	19,950	19,600	*14,710	9,660	10,620	6,330					8,630	5,260	6,890
	-4.5 m	kg	*15,930	*15,930	*11,870	10,000							*9,540	7,540	5,460
with 600 mm shoe 5,400 kg CWT boom 6.2 m + arm 3.05 m	6.0 m	kg							*6,840	5,280			*5,540	4,560	8,140
	4.5 m	kg					*8,070	7,300	*7,290	5,140			*5,530	3,980	8,730
	3.0 m	kg			*12,730	10,530	*9,490	6,890	7,910	4,940	5,930	3,700	*5,710	3,680	9,030
	1.5 m	kg			*15,150	9,810	*10,830	6,520	7,690	4,740	5,830	3,620	5,770	3,580	9,070
	0.0 m	kg			*16,220	9,490	10,570	6,280	7,530	4,600			5,910	3,640	8,850
	-1.5 m	kg	*10,580	*10,580	*16,200	9,420	10,450	6,180	7,460	4,540			6,390	3,930	8,360
	-3.0 m	kg	*17,570	*17,570	*15,260	9,510	10,490	6,210	7,530	4,600			7,470	4,570	7,540
	-4.5 m	kg	*17,940	*17,940	*13,040	9,770	*9,540	6,430					*8,900	6,080	6,260
with 600 mm shoe 5,400 kg CWT boom 6.2 m + arm 4.0 m	6.0 m	kg							*5,740	5,410	*4,470	3,890	*3,980	3,790	9,120
	4.5 m	kg							*6,310	5,230	*5,970	3,830	*3,980	3,360	9,650
	3.0 m	kg			*10,570	*10,570	*8,260	7,040	*7,130	4,980	5,950	3,710	*4,090	3,130	9,920
	1.5 m	kg			*13,470	10,020	*9,800	6,580	7,700	4,730	5,800	3,580	*4,320	3,040	9,950
	0.0 m	kg	*6,540	*6,540	*15,330	9,440	10,540	6,230	7,470	4,530	5,680	3,470	*4,710	3,070	9,760
	-1.5 m	kg	*9,740	*9,740	*16,040	9,200	10,310	6,040	7,330	4,400	5,620	3,410	5,350	3,250	9,320
	-3.0 m	kg	*14,200	*14,200	*15,780	9,180	10,260	5,990	7,300	4,380			6,030	3,660	8,590
	-4.5 m	kg	*20,790	18,930	*14,470	9,340	10,370	6,080	7,440	4,510			7,440	4,500	7,500
with 600 mm shoe 5,800 kg CWT boom 6.2 m + arm 2.55 m	6.0 m	kg					*7,670	*7,670	*7,490	5,420			*7,500	5,360	7,540
	4.5 m	kg			*10,800	*10,800	*8,710	7,500	*7,790	5,320			7,250	4,620	8,170
	3.0 m	kg			*13,800	10,730	*10,070	7,110	8,150	5,140			6,710	4,250	8,490
	1.5 m	kg			*15,850	10,130	11,180	6,780	7,960	4,970			6,560	4,120	8,540
	0.0 m	kg			*16,420	9,930	10,960	6,580	7,830	4,850			6,760	4,220	8,310
	-1.5 m	kg	*11,580	*11,580	*16,020	9,940	10,890	6,530	7,810	4,830			7,410	4,600	7,780
	-3.0 m	kg	*19,950	*19,950	*14,710	10,080	10,990	6,610					8,930	5,500	6,890
	-4.5 m	kg	*15,930	*15,930	*11,870	10,420							*9,540	7,860	5,460
with 600 mm shoe 5,800 kg CWT boom 6.2 m + arm 3.05 m	6.0 m	kg							*6,840	5,480			*5,540	4,740	8,140
	4.5 m	kg					*8,070	7,560	*7,290	5,340			*5,530	4,150	8,730
	3.0 m	kg			*12,730	10,920	*9,490	7,150	*8,000	5,140	*5,970	3,860	*5,710	3,840	9,030
	1.5 m	kg			*15,150	10,200	*10,830	6,780	7,940	4,940	6,030	3,780	5,960	3,730	9,070
	0.0 m	kg			*16,220	9,880	10,920	6,540	7,780	4,800			6,110	3,810	8,850
	-1.5 m	kg	*10,580	*10,580	*16,200	9,810	10,800	6,440	7,720	4,740			6,610	4,100	8,360
	-3.0 m	kg	*17,570	*17,570	*15,260	9,900	10,840	6,480	7,790	4,800			7,720	4,770	7,540
	-4.5 m	kg	*17,940	*17,940	*13,040	10,170	*9,540	6,690					*8,900	6,330	6,260
with 600 mm shoe 5,800 kg CWT boom 6.2 m + arm 4.0 m	6.0 m	kg							*5,740	5,620	*4,470	4,070	*3,980	3,960	9,120
	4.5 m	kg							*6,310	5,440	*5,970	4,000	*3,980	3,520	9,650
	3.0 m	kg			*10,570	*10,570	*8,260	7,320	*7,130	5,200	6,160	3,880	*4,090	3,280	9,920
	1.5 m	kg			*13,470	10,440	*9,800	6,860	7,970	4,950	6,020	3,750	*4,320	3,190	9,950
	0.0 m	kg	*6,540	*6,540	*15,330	9,860	10,910	6,510	7,740	4,740	5,890	3,640	*4,710	3,220	9,760
	-1.5 m	kg	*9,740	*9,740	*16,040	9,620	10,690	6,320	7,600	4,620	5,830	3,580	*5,370	3,410	9,320
	-3.0 m	kg	*14,200	*14,200	*15,780	9,600	10,630	6,270	7,570	4,590			6,250	3,840	8,590
	-4.5 m	kg	*20,790	19,740	*14,470	9,760	10,740	6,370	7,710	4,720			7,710	4,720	7,500
with 600 mm shoe 5,800 kg CWT 2-piece boom 6.2 m + arm 2.55 m	6.0 m	kg	*10,980	*10,980	*11,660	*11,660	*9,780	7,790	8,470	5,360			*8,050	5,210	7,620
	4.5 m	kg			*13,560	11,590	*10,540	7,440	8,350	5,250			7,130	4,480	8,240
	3.0 m	kg			*15,580	10,590	*11,410	7,020	8,130	5,060			6,610	4,120	8,560
	1.5 m	kg					11,140	6,660	7,930	4,880			6,460	4,000	8,600
	0 m	kg			*15,430	9,760	10,910	6,460	7,800	4,760			6,650	4,100	8,380
	-1.5 m	kg			*13,630	9,780	*10,700	6,410	7,790	4,750			7,300	4,470	7,860
	-3.0 m	kg			*10,780	9,960	*8,510	6,520					*6,600	5,350	6,970
	-4.5 m	kg													
with 600 mm shoe 5,800 kg CWT 2-piece boom 6.2 m + arm 3.05 m	6.0 m	kg			*8,740	*8,740	*9,180	7,910	*8,180	5,450			*5,570	4,620	8,210
	4.5 m	kg			*12,700	11,870	*10,060	7,540	8,410	5,300			*5,510	4,040	8,800
	3.0 m	kg			*14,900	10,840	*11,040	7,100	8,170	5,080	6,120	3,810	*5,650	3,740	9,090
	1.5 m	kg			*16,120	10,060	11,190	6,700	7,930	4,870	6,020	3,720	5,880	3,630	9,130
	0 m	kg			*15,850	9,720	10,890	6,440	7,770	4,720			6,030	3,710	8,920
	-1.5 m	kg	*9,830	*9,830	*14,430	9,670	10,780	6,340	7,700	4,660			6,530	4,000	8,430
	-3.0 m	kg			*11,950	9,790	*9,330	6,400	*6,640	4,750			*6,330	4,660	7,620
	-4.5 m	kg													
with 600 mm shoe 5,800 kg CWT 2-piece boom 6.2 m + arm 4.0 m	6.0 m	kg					*6,400	*6,400	*6,510	5,600	*4,810	4,020	*4,000	3,830	9,210
	4.5 m	kg	* 6,390	*6,390	*7,380	*7,380	*7,650	*7,650	*7,410	5,410	*6,150	3,950	*3,970	3,410	9,730
	3.0 m	kg			*13,310	11,330	*10,150	7,270	8,250	5,140	6,150	3,820	*4,050	3,170	10,000
	1.5 m	kg			*15,250	10,300	*11,140	6,770	7,950	4,870	5,990	3,680	*4,250	3,080	10,030
	0 m	kg	*5,840	*5,840	*15,920	9,680	10,870	6,400	7,710	4,650	5,870	3,560	*4,590	3,120	9,840
	-1.5 m	kg	*9,080	*9,080	*15,320	9,440	10,640	6,200	7,570	4,520	5,810	3,510	*5,170	3,310	9,400
	-3.0 m	kg	*13,610	*13,610	*13,610	9,440	*10,360	6,150	7,550	4,510			*5,970	3,720	8,680
	-4.5 m	kg			*10,620	9,640	*8,120	6,280	*5,490	4,660			*5,410	4,640	7,530

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 NLC

Across undercarriage / Along undercarriage	Lifting hook related to ground level		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		Max. reach		
															Max. mm
with 600 mm shoe 5,800 kg CWT boom 6.2 m + arm 2.55 m	6.0 m	kg					*7,670	7,060	*7,490	4,890			*7,500	4,840	7,540
	4.5 m	kg			*10,800	10,420	*8,710	6,750	7,620	4,790			6,620	4,150	8,170
	3.0 m	kg			*13,800	9,530	*10,070	6,370	7,430	4,610			6,120	3,800	8,490
	1.5 m	kg			*15,850	8,960	10,110	6,050	7,240	4,440			5,980	3,680	8,540
	0.0 m	kg			15,820	8,760	9,900	5,860	7,120	4,330			6,150	3,770	8,310
	-1.5 m	kg	*11,580	*11,580	15,830	8,770	9,830	5,800	7,090	4,310			6,740	4,110	7,780
	-3.0 m	kg	*19,950	17,600	*14,710	8,910	9,930	5,890					8,100	4,910	6,890
	-4.5 m	kg	*15,930	*15,930	*11,870	9,230							*9,540	7,010	5,460
with 600 mm shoe 5,800 kg CWT boom 6.2 m + arm 3.05 m	6.0 m	kg						*6,840	4,960			*5,540	4,280	8,140	
	4.5 m	kg					*8,070	6,840	*7,290	4,820			*5,530	3,730	8,730
	3.0 m	kg			*12,730	9,740	*9,490	6,430	7,450	4,620	5,600	3,470	5,570	3,450	9,030
	1.5 m	kg			*15,150	9,050	10,150	6,070	7,240	4,430	5,500	3,380	5,440	3,340	9,070
	0.0 m	kg			15,800	8,730	9,880	5,830	7,080	4,290			5,570	3,400	8,850
	-1.5 m	kg	*10,580	*10,580	15,720	8,670	9,770	5,740	7,010	4,230			6,020	3,670	8,360
	-3.0 m	kg	*12,570	17,270	*15,260	8,760	9,800	5,770	7,090	4,290			7,030	4,260	7,540
	-4.5 m	kg	*17,940	17,740	*13,040	9,010	*9,540	5,980					*8,900	5,660	6,260
with 600 mm shoe 5,800 kg CWT boom 6.2 m + arm 4.0 m	6.0 m	kg							*5,740	5,090	*4,470	3,650	*3,980	3,550	9,120
	4.5 m	kg							*6,310	4,910	5,750	3,590	*3,980	3,150	9,650
	3.0 m	kg			*10,570	10,160	*8,260	6,570	*7,130	4,670	5,610	3,470	*4,090	2,920	9,920
	1.5 m	kg			*13,470	9,240	*9,800	6,120	7,240	4,420	5,470	3,340	*4,320	2,830	9,950
	0.0 m	kg	*6,540	*6,540	*15,330	8,690	9,850	5,780	7,020	4,220	5,350	3,230	*4,710	2,860	9,760
	-1.5 m	kg	*9,740	*9,740	15,490	8,450	9,630	5,590	6,880	4,100	5,290	3,170	5,040	3,030	9,320
	-3.0 m	kg	*14,200	*14,200	15,470	8,430	9,570	5,540	6,860	4,070			5,670	3,400	8,590
	-4.5 m	kg	*20,790	16,950	*14,470	8,590	9,680	5,640	6,990	4,190			6,990	4,190	7,500
with 600 mm shoe 5,800 kg CWT 2-piece boom 6.2 m + arm 2.55 m	6.0 m	kg	*10,980	*10,980	*11,660	11,200	*9,780	7,040	7,750	4,840			7,530	4,700	7,620
	4.5 m	kg			*13,560	10,380	*10,540	6,700	7,620	4,730			6,510	4,020	8,240
	3.0 m	kg			*15,580	9,410	10,480	6,290	7,410	4,540			6,020	3,690	8,560
	1.5 m	kg					10,080	5,940	7,210	4,360			5,880	3,570	8,600
	0 m	kg			*15,430	8,600	9,860	5,740	7,090	4,240			6,060	3,650	8,380
	-1.5 m	kg			*13,630	8,620	9,800	5,700	7,070	4,230			6,640	3,990	7,860
	-3.0 m	kg			*10,780	8,800	*8,510	5,800					*6,600	4,780	6,970
	-4.5 m	kg													
with 600 mm shoe 5,800 kg CWT 2-piece boom 6.2 m + arm 3.05 m	6.0 m	kg			*8,740	*8,740	*9,180	7,660	7,850	4,920			*5,570	4,160	8,210
	4.5 m	kg			*12,700	10,640	*10,060	6,800	7,680	4,770			*5,510	3,620	8,800
	3.0 m	kg			*14,900	9,650	10,580	6,360	7,450	4,560	5,580	3,400	5,480	3,340	9,090
	1.5 m	kg			*16,120	8,890	10,130	5,970	7,220	4,350	5,480	3,310	5,360	3,240	9,130
	0 m	kg			15,740	8,570	9,840	5,720	7,050	4,200			5,490	3,300	8,920
	-1.5 m	kg	*9,830	*9,830	*14,430	8,510	9,730	5,630	6,990	4,150			5,940	3,560	8,430
	-3.0 m	kg			*11,950	8,630	*9,330	5,680	*6,640	4,230			*6,330	4,150	7,620
	-4.5 m	kg													
with 600 mm shoe 5,800 kg CWT 2-piece boom 6.2 m + arm 4.0 m	6.0 m	kg					*6,400	*6,400	*6,510	5,070	*4,810	3,610	*4,000	3,430	9,210
	4.5 m	kg	*6,380	*6,390	*7,380	*7,380	*7,650	7,030	*7,410	4,880	5,750	3,540	*3,970	3,040	9,730
	3.0 m	kg			*13,310	10,110	*10,150	6,530	7,530	4,610	5,610	3,410	*4,050	2,820	10,000
	1.5 m	kg			*15,250	9,120	10,230	6,040	7,230	4,350	5,450	3,270	*4,250	2,730	10,030
	0 m	kg	*5,840	*5,840	15,720	8,520	9,810	5,680	6,990	4,130	5,330	3,160	*4,590	2,760	9,840
	-1.5 m	kg	*9,080	*9,080	*15,320	8,280	9,590	5,480	6,850	4,010	5,270	3,110	4,960	2,930	9,400
	-3.0 m	kg	*13,610	*13,610	*13,610	8,280	9,540	5,440	6,830	3,990			5,580	3,300	8,680
	-4.5 m	kg			*10,620	8,480	*8,120	5,560	*5,490	4,140			*5,410	4,120	7,530

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.

STANDARD EQUIPMENT

Engine
Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler
Air filter with indicator, and pre-cleaner
Air intake heater
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
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

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

Superstructure
Access way with handrail
Tool storage area
Punched metal anti-slip plates

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
- Sun screens, front, roof, rear
- Sunlight protection, roof (steel)

Master key

Undercarriage
Hydraulic track adjusters
Greased and sealed track chain
Track guards

OPTIONAL EQUIPMENT

Engine
Block heater, 120 V / 240 V
Fuel filler pump: 35 l/min, 50 l/min with automatic shut-off
Oil bath pre-cleaner
Diesel coolant heater, 5kW

Electric
Extra lamps:
- Cab-mounted 3, (front 2, rear 1)
- Boom-mounted 2
- Counterweight-mounted 1

Rotating warning beacon
Travel alarm

Hydraulic system
Hose rupture valve: boom, arm
Overload warning device
Hydraulic piping
- Hammer & shears:
  - 1 pump flow
  - 2 pump flow
  - Pump flow control for hammer & shears
  - Additional return filter
  - Extra piping for slope & rotator
  - 1 switch control
  - 2 switch control
  - Pedal control
- Slope & rotator
- Grapple
- Oil leak (drain) line
- Quick fit piping

Volvo hydraulic quick-fit (S2)
Hydraulic oil, ISO VG 32
Hydraulic oil, ISO VG 46
Hydraulic oil, ISO VG 68
Hydraulic oil, biodegradable 32
Hydraulic oil, biodegradable 46
Pilot control pattern change
Boom floating function
Pilot-operated wrist control joysticks:
- Semi-long joysticks
- Control joystick, with 3 switches each
- Control joystick, with 5 switches each

Cab and interior
Fabric seat
Fabric seat, with heater
Fabric seat, with heater and air suspension
Air-conditioner without heater, manual
Heater & air-conditioner, automatic
AM/FM stereo with CD player and MP3 input
Cab mounted falling object guard (FOG)
Cab mounted falling object protective structures (FOPS)
Rain shield, front
Safety screen for front window
Lower wiper
Anti-vandalism kit assembly preparation
Anti-vandalism kit
Specific key

Track shoes
Track shoes 600 / 700 / 800 / 900 mm with triple grousers
Track shoes 700 mm track shoes with double grouser

Superstructure
Counterweight, 5,400 kg / 5,800 kg
Undercover (2.3 / HD 4.5 mm)

Digging equipment
Boom: 6.2 m monoblock
6.2 m HD
Arm: 2.55 / 3.05 / 4.0 m
3.05 m HD
Extended greasing bushing

Undercarriage
LC (Long crawler)
NLC (Narrow long crawler)
Full track guards
Undercover (4.5 / HD 10 mm)

Service
Hand lamp
Tool kit, full scale
Tool kit, daily maintenance
Spare parts

Standard and optional equipment may vary by market. Please consult your local Volvo dealer for details.

VOLVO

Volvo Construction Equipment
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Ref. No. A8 B 435 1643 English (for Asia region)
Printed in Sweden 2009.04-1.0 EXC
Volvo, Seoul