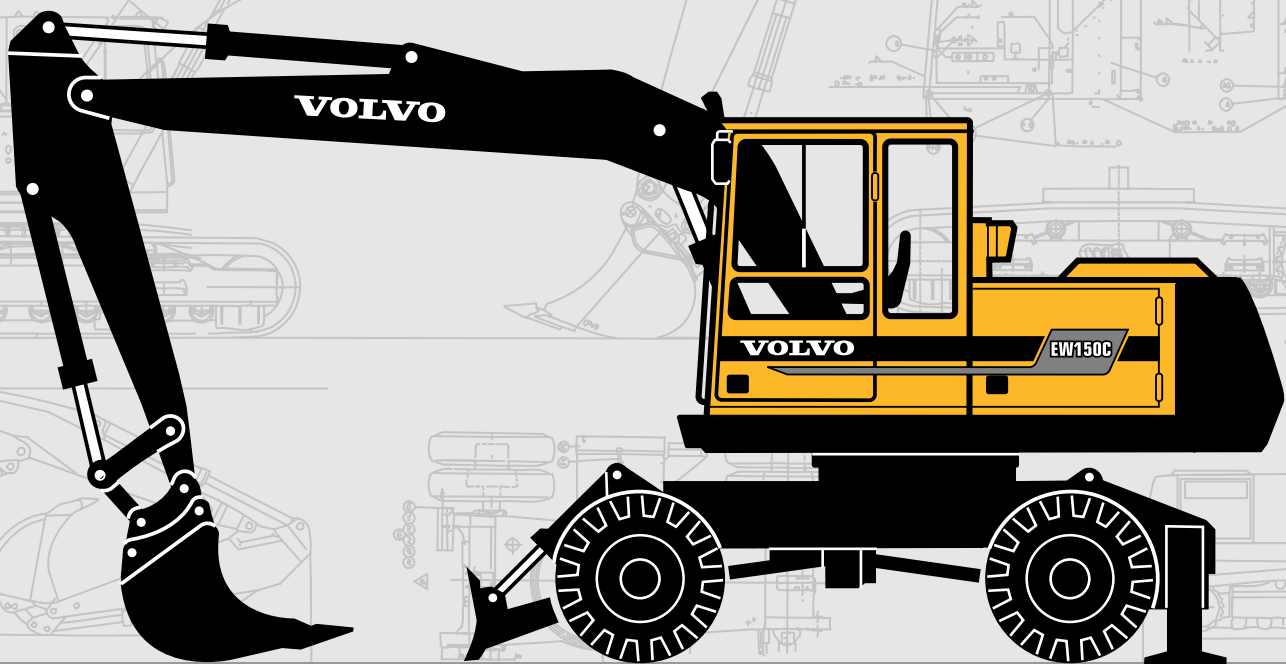


**VOLVO EXCAVATOR**

# EW150C

**MONOBLOC / 2-PIECE BOOM**



- Engine Power, gross:  
81 kW (110 hp)
- Operating Weight:  
13,7 – 15,0 t
- Buckets:  
160 – 700 l
- Low emission, turbocharged,  
diesel engine with direct  
injection and intercooler
- Three-circuit hydraulic system  
with pump regulation PSC.  
(Pressure Sensing Control)
- Care cab
  - computerized control and  
warning system
  - ergonomic environment
  - low sound level
  - filtered air
- Highest flexibility for extra  
equipment / hydraulics
- Four travel speeds –  
max. 28 km/h
- Individually operated outriggers  
and dozer blade
- Hydraulic quickfit

**VOLVO**



## ENGINE

The engine is a low emission, turbocharged, 4-stroke diesel engine with water cooling, direct injection and intercooling.

Model .....	TD 40 KEE
Output at .....	33,3 r/s (2 000 r/min)
Net (ISO 9249 / DIN 6271) .....	78 kW (106 hp)
Gross (SAE J1349) .....	81 kW (110 hp)
No. of cylinders .....	4
Displacement, total .....	4,0 l
Bore .....	100 mm
Stroke .....	127 mm



## UNDERCARRIAGE

**Drive Train:** One big variable piston motor on the midmounted two-step gearbox gives power to front and rear axles, both with hub reductions.

**Framework:** All-welded robust torsion box frame.

**Wheels:** Alternative single and twin wheels available.

**Front axle:** Oscillating  $\pm 7^\circ$ .

Twin wheels, standard .....	10.00–20 PR14
Max tractive force .....	106 kN
Travel speed, road travel .....	28,0 km/h (15,0 km/h)*
Travel speed, site travel .....	7,9 km/h (3,9 km/h)*
Turning radius, front wheels .....	6,55 m

\* In working program ECO.



## BRAKES

Brake system corresponds to ISO 3450.

**Service brakes** consist of a 2-circuit oil servo system with drum brakes on each axle.

**Parking brake** of drum type mounted on the gearbox. It is activated by spring power and servo released.

**Digging brake** without play is obtained through the same drum brake system.

**Security system:** The 2-circuit travel brakes are supplied with two accumulators in the event of failure in the service brake system.



## CARE CAB

Operator's cab with a supporting frame structure. Large panes for all round good visibility. The upper front pane can be pushed up in the ceiling, and the lower one can be removed. Sliding window in the cab door.

**Heater and defroster:** Pressurized and filtered cab. A 3-speed fan provides efficient heating and defrosting through 14 outlets. Prepared for Air Conditioning.

**Operator's seat:** Adjustable suspension operator's seat with heating, headrest, individually adjustable armrests and hand controls.

**Acoustics:** Approved according to 86/662/EEC.

Surroundings (ISO 6393)	
L <sub>WA</sub> (acoustic power) .....	99 dB(A)
Inside the cab (ISO 6394)	
with the door closed	
L <sub>PA</sub> (acoustic pressure) .....	75 dB(A)



## ELECTRICAL SYSTEM

Micro processor for monitoring of engine / hydraulic system. High capacity and well protected electric system. Printed circuit board based electric central with clearly arranged fuses and relays. Central prepared for connecting optional equipment. Battery disconnecter standard.

Voltage .....	24 V
Battery .....	4 x 12 V
Battery capacity .....	120 Ah
A.C. Generator .....	28/60 V/A
Alternator rating .....	1 680 W



## SERVICE REFILL CAPACITIES

Fuel tank .....	225 l
Fuel pump capacity .....	90 l/min
Hydraulic system, total .....	220 l
Diesel engine oil .....	8,1 l
Cooling system (incl. glycol) .....	35,0 l
Slew gearbox .....	15,0 l
Travel gearbox .....	4,0 l



## HYDRAULIC SYSTEM

3-circuit system all-servo controlled.

**Pumps:** P1 is a variable axial piston pump with priority to slew circuit. P2 / P3 is a dual power controlled variable piston pump.

The Mode Selector has three working programs.

### Excavating:

**ECO** = Completely separated movements for the best excavating precision

**CAP** = Capacity – all three pumps can be used for the excavating movement

**HLD** = To increase the lifting capacity by 20 % (temporarily selectable in 10 s)

**Valve system:** The valve blocks are of monobloc type with possibility to use all three working pumps for all three movements of the digging equipment. There are valves prepared for two additional functions.

Float position function on the boom movement gives better operator comfort, less bucket wear and quicker digging equipment extension.

Standard hose rupture valve on the boom cylinder.

Pump P1	
Max. pressure .....	28 MPa
Max. flow .....	77 l/min
Pumps P2 and P3	
Max. pressure .....	30 MPa
Max. pressure with HLD .....	34 MPa
Max. flow .....	2 x 106 l/min
Servo pump	
Pressure .....	6,5 MPa
Flow .....	23 l/min
Steering pump	
Pressure .....	14 MPa
Flow .....	23 l/min



## SLEWING SYSTEM

The superstructure is slewed by a two-step axial piston motor through a servo released slew brake, into the two-step slew gear giving torque to the inner tooth race of the slew ring.

Slew, start to stop*	
90° turn .....	3,8 s
180° turn .....	5,8 s
Slew speed .....	9,4 r/min

\* Empty bucket and equipment extended.



## WEIGHT AND AXLE LOAD

Machine with 4,9 m monobloc boom, 2,4 m dipper arm, hydraulic quickfit, 600 l bucket and counterweight 2 500 kg.

Total machine weight	
incl. dozer blade and outriggers .....	14 600 kg
Axle load	
Front axle .....	6 300 kg
Rear axle .....	8 300 kg



Total machine weight incl. support blade	
(excl. dozer blade and outriggers) .....	13 650 kg
Axle load	
Front axle .....	5 830 kg
Rear axle .....	7 820 kg

Machine with 5,0 m 2-piece boom, 2,4 m dipper arm, hydraulic quickfit, 600 l bucket and counterweight 2 500 kg.

Total machine weight	
incl. dozer blade and outriggers .....	15 000 kg
Axle load	
Front axle .....	5 000 kg
Rear axle .....	10 000 kg

Total machine weight incl. support blade	
(excl. dozer blade and outriggers) .....	14 050 kg
Axle load	
Front axle .....	4 530 kg
Rear axle .....	9 520 kg

# LIFTING CAPACITIES *(In the quickfit lifting hook without bucket. Unit: 1 000 kg)*



 Across carriage  Along carriage	Lifting hook related to ground level	Reach from machine center																							
		3,0 m								4,5 m				6,0 m				7,5 m				Max. reach			
		u		d		u		d		u		d		u		d		u		d		u		d	
4,9 m boom 2,0 m arm Quickfit Outriggers and dozer blade	6,0 m									2,2	2,9*	2,2	2,9*					2,2	2,9*	2,2	2,9*	6,0			
	4,5 m					3,3	3,4*	3,2	3,4*	2,1	3,0*	2,1	3,0*					1,7	2,3*	1,7	2,3*	7,0			
	3,0 m					3,0	4,2*	3,0	4,2*	2,0	3,2	2,0	3,4*					1,5	2,3	1,5	2,8*	7,4			
	1,5 m					2,8	4,6	2,8	5,1*	1,9	3,1	1,9	3,7*	1,4	2,2	1,4	2,9	1,4	2,2	1,4	2,9	7,5			
	0,0 m					2,7	4,5	2,7	5,4*	1,9	3,0	1,8	3,9					1,5	2,3	1,4	3,0	7,3			
	-1,5 m	5,0	7,4*	4,8	7,4*	2,7	4,5	2,7	5,1*	1,9	3,0	1,8	3,7*					1,6	2,6	1,6	3,2*	6,7			
	-3,0 m	5,0	6,0*	4,9	6,0*	2,8	4,2*	2,7	4,2*									2,1	3,1*	2,1	3,1*	5,6			
4,9 m boom 2,4 m arm Quickfit Outriggers and dozer blade	6,0 m									2,2	2,6*	2,2	2,6*					1,9	2,5*	1,9	2,5*	6,5			
	4,5 m					3,1*	3,1*	3,1*	3,1*	2,2	2,8*	2,1	2,8*					1,5	2,1*	1,5	2,1*	7,4			
	3,0 m					3,1	3,9*	3,0	3,9*	2,0	3,2	2,0	3,2*	1,5	2,3	1,4	2,9*	1,4	2,1	1,4	2,3*	7,8			
	1,5 m					2,8	4,6	2,8	4,9*	1,9	3,1	1,9	3,6*	1,4	2,2	1,4	2,9	1,3	2,1	1,3	2,4*	7,9			
	0,0 m					2,7	4,5	2,7	5,3*	1,9	3,0	1,8	3,8*	1,4	2,2	1,4	2,8	1,3	2,1	1,3	2,6*	7,7			
	-1,5 m	4,9	7,3*	4,8	7,3*	2,7	4,5	2,6	5,2*	1,8	3,0	1,8	3,8*					1,5	2,3	1,4	2,4*	7,2			
	-3,0 m	5,0	6,5*	4,8	6,5*	2,7	4,5*	2,7	4,5*	1,9	3,0	1,9	3,1*					1,9	3,0	1,8	3,0*	6,1			
4,9 m boom 2,0 m arm Quickfit Support blade	6,0 m									2,0	2,2	2,0	2,9*					2,0	2,2	2,0	2,9*	6,0			
	4,5 m					3,0	3,4*	3,0	3,4*	2,0	2,2	1,9	3,0*					1,5	1,7	1,5	2,3*	7,0			
	3,0 m					2,8	3,1	2,7	4,2*	1,9	2,1	1,8	3,4*					1,4	1,5	1,3	2,8*	7,4			
	1,5 m					2,6	2,9	2,5	5,1*	1,8	2,0	1,7	3,7*	1,3	1,5	1,3	2,9	1,3	1,5	1,3	2,9	7,5			
	0,0 m					2,5	2,8	2,4	5,4*	1,7	1,9	1,7	3,9*					1,3	1,5	1,3	3,0	7,3			
	-1,5 m	4,6	5,3	4,4	7,4*	2,5	2,8	2,4	5,1*	1,7	1,9	1,7	3,7*					1,5	1,7	1,5	3,2*	6,7			
	-3,0 m	4,7	5,4	4,5	6,0*	2,6	2,9	2,5	4,2*									1,9	2,2	1,9	3,1*	5,6			
4,9 m boom 2,4 m arm Quickfit Support blade	6,0 m									2,1	2,3	2,0	2,6*					1,8	2,0	1,8	2,5*	6,5			
	4,5 m					3,1*	3,1*	3,0	3,1*	2,0	2,2	2,0	2,8*					1,4	1,6	1,4	2,1*	7,4			
	3,0 m					2,8	3,2	2,8	3,9*	1,9	2,1	1,9	3,2*	1,3	1,5	1,3	2,8*	1,3	1,4	1,2	2,3*	7,8			
	1,5 m					2,6	2,9	2,5	4,9*	1,8	2,0	1,7	3,6*	1,3	1,4	1,3	2,9	1,2	1,3	1,2	2,4*	7,9			
	0,0 m					2,5	2,8	2,4	5,3*	1,7	1,9	1,7	3,8*	1,3	1,4	1,2	2,8	1,2	1,4	1,2	2,6*	7,7			
	-1,5 m	4,5	5,2	4,4	7,3*	2,5	2,8	2,4	5,2*	1,7	1,9	1,6	3,8*					1,3	1,5	1,3	2,4*	7,2			
	-3,0 m	4,6	5,3	4,4	6,5*	2,5	2,8	2,5	4,5*	1,7	1,9	1,7	3,1*					1,7	1,9	1,7	3,0*	6,1			

\* Limited by hydraulic lifting capacity .

The above loads are in compliance with ISO standard 10567.  
They do not exceed 87 % of hydraulic lifting capacity or 75 % of tipping load,  
with the machine on firm and level ground.

Working pressure with HLD = 34 MPa (340 bar)

# LIFTING CAPACITIES *(In the quickfit lifting hook without bucket. Unit: 1 000 kg)*

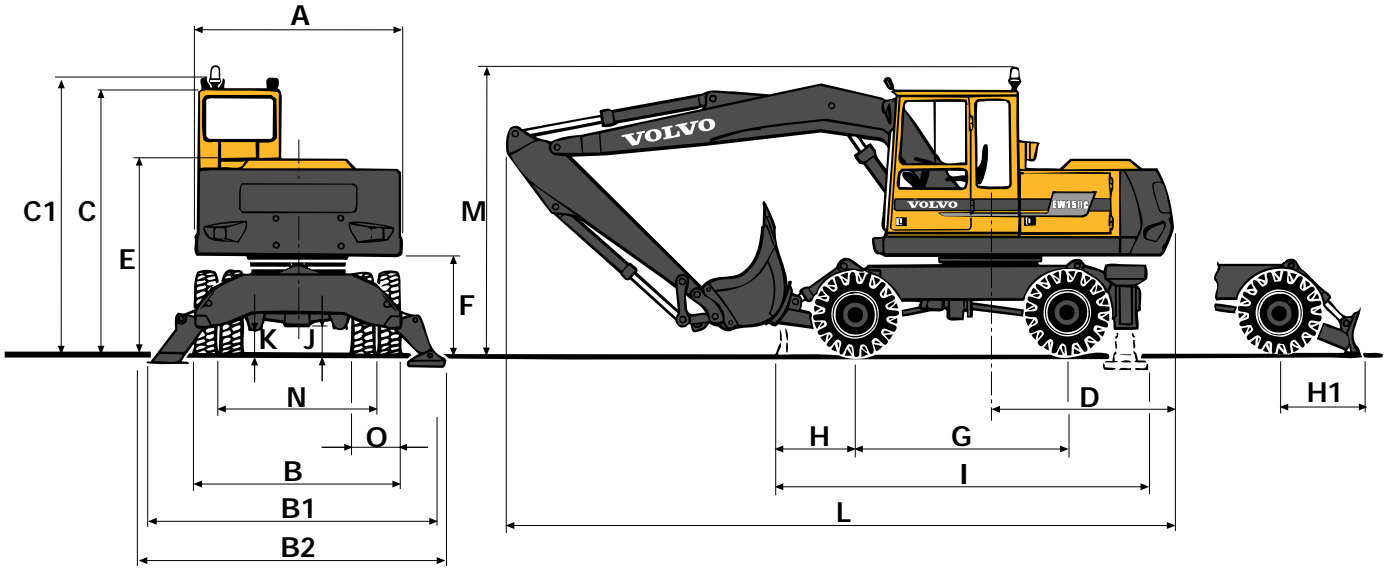
 Across carriage  Along carriage	Lifting hook related to ground level	Reach from machine center																u = support up		d = support down		
		3,0 m				4,5 m				6,0 m				7,5 m				Max. reach				Max. m
		u	d	u	d	u	d	u	d	u	d	u	d	u	d	u	d	u	d	u	d	
5,0 m 2-piece boom 2,0 m arm Quickfit Outriggers and dozer blade	7,5 m					3,2*	3,2*	3,2*	3,2*									3,2*	3,2*	3,2*	3,2*	4,5
	6,0 m					3,5	3,8*	3,4	3,8*	2,2	3,3*	2,2	3,3*					2,1	3,0*	2,1	3,0*	6,1
	4,5 m	5,8*	5,8*	5,8	5,8*	3,3	4,3*	3,2	4,3*	2,1	3,3	2,1	3,5*					1,7	2,6	1,6	2,9*	7,0
	3,0 m					3,0	4,8	2,9	4,9*	2,0	3,2	2,0	3,7*	1,4	2,3	1,4	2,6*	1,4	2,3	1,4	2,6*	7,5
	1,5 m					2,7	4,6	2,7	5,3*	1,9	3,0	1,9	3,8*	1,4	2,2	1,4	2,9	1,4	2,2	1,3	2,8	7,6
	0,0 m					2,6	4,4	2,6	5,1*	1,8	2,9	1,8	3,7*					1,4	2,2	1,4	2,8*	7,4
	-1,5 m					4,8	5,4*	4,6	5,4*	2,6	4,3*	2,6	4,3*	1,8	2,9	1,8	3,2*					6,8
5,0 m 2-piece boom 2,4 m arm Quickfit Outriggers and dozer blade	7,5 m					3,6	3,6*	3,5	3,6*									2,6*	2,6*	2,6*	2,6*	5,2
	6,0 m					3,5*	3,5*	3,5	3,5*	2,2	3,2*	2,2	3,2*					1,9	2,4*	1,9	2,4*	6,6
	4,5 m	4,6*	4,6*	4,6*	4,6*	3,4	4,0*	3,3	4,0*	2,2	3,3*	2,1	3,3*	1,5	2,0*	1,5	2,0*	1,5	2,0*	1,5	2,0*	7,5
	3,0 m					3,1	4,7*	3,0	4,7*	2,0	3,2	2,0	3,6*	1,4	2,3	1,4	2,9	1,3	2,1	1,3	2,2*	7,9
	1,5 m					2,8	4,6	2,7	5,2*	1,9	3,1	1,9	3,8*	1,4	2,2	1,4	2,9	1,2	2,0	1,2	2,3*	8,0
	0,0 m					2,6	4,4	2,6	5,2*	1,8	2,9	1,8	3,8*	1,3	2,2	1,3	2,8	1,3	2,1	1,2	2,4*	7,8
	-1,5 m					4,7	6,1*	4,6	6,1*	2,6	4,4	2,5	4,6*	1,8	2,9	1,7	3,3*					7,2
-3,0 m					2,6	3,3*	2,6	3,3*										1,8	2,3*	1,8	2,3*	5,9
5,0 m 2-piece boom 2,0 m arm Quickfit Support blade	7,5 m					3,2*	3,2*	3,2	3,2*									3,2*	3,2*	3,2	3,2*	4,5
	6,0 m					3,3	3,7	3,2	3,8*	2,0	2,3	2,0	3,3*					2,0	2,2	1,9	3,0*	6,1
	4,5 m	5,6	5,8*	5,4	5,8*	3,1	3,4	3,0	4,3*	2,0	2,2	1,9	3,5*					1,5	1,7	1,5	2,9*	7,0
	3,0 m					2,8	3,1	2,7	4,9*	1,9	2,1	1,8	3,7*	1,3	1,5	1,3	2,6*	1,3	1,5	1,3	2,6*	7,5
	1,5 m					2,5	2,8	2,4	5,3*	1,7	1,9	1,7	3,8*	1,3	1,4	1,2	2,9	1,2	1,4	1,2	2,8	7,6
	0,0 m					2,4	2,7	2,3	5,1*	1,6	1,9	1,6	3,7*					1,2	1,4	1,2	2,8*	7,4
	-1,5 m					4,4	5,1	4,2	5,4*	2,4	2,7	2,3	4,3*	1,6	1,8	1,6	3,2*					6,8
5,0 m 2-piece boom 2,4 m arm Quickfit Support blade	7,5 m					3,4	3,6*	3,3	3,6*									2,6*	2,6*	2,5	2,6*	5,2
	6,0 m					3,3	3,5*	3,3	3,5*	2,1	2,3	2,0	3,2*					1,7	1,9	1,7	2,4*	6,6
	4,5 m	4,6*	4,6*	4,6*	4,6*	3,1	3,5	3,1	4,0*	2,0	2,2	2,0	3,3*	1,4	1,5	1,3	2,0*	1,4	1,5	1,3	2,0*	7,5
	3,0 m					2,8	3,2	2,8	4,7*	1,9	2,1	1,8	3,6*	1,3	1,5	1,3	3,0	1,2	1,3	1,2	2,2*	7,9
	1,5 m					2,5	2,9	2,5	5,2*	1,7	2,0	1,7	3,8*	1,3	1,4	1,2	2,9	1,1	1,3	1,1	2,3*	8,0
	0,0 m					2,4	2,7	2,3	5,2*	1,6	1,9	1,6	3,8*	1,2	1,4	1,2	2,8	1,1	1,3	1,1	2,4*	7,8
	-1,5 m					4,3	5,1	4,2	6,1*	2,4	2,7	2,3	4,6*	1,6	1,8	1,6	3,3*					7,2
-3,0 m					2,4	2,7	2,4	3,3*										1,7	1,9	1,6	2,3*	5,9

\* Limited by hydraulic lifting capacity .

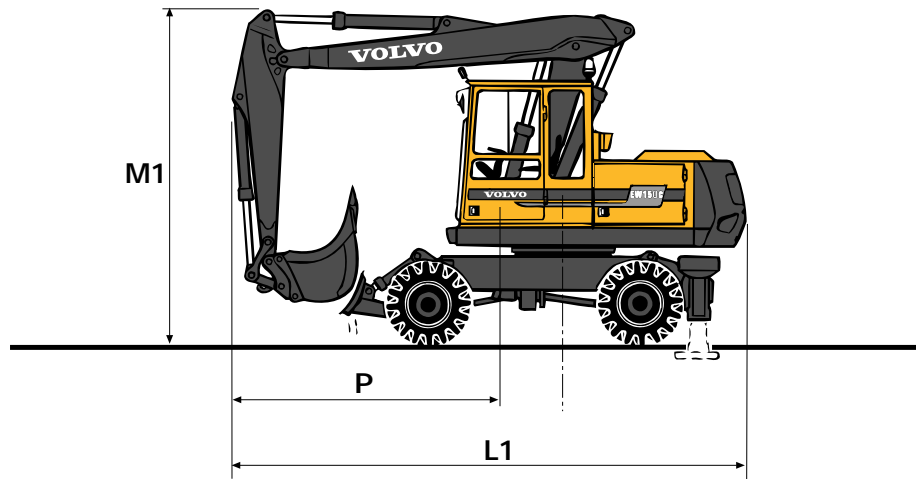
The above loads are in compliance with ISO standard 10567.  
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with the machine on firm and level ground.

Working pressure with HLD = 34 MPa (340 bar)

# DIMENSIONS



A	2 430 mm
B	2 500 mm
B <sub>1</sub>	3 520 mm
B <sub>2</sub>	3 530 mm
C	3 120 mm
C <sub>1</sub>	3 260 mm
D	2 170 mm
E	2 300 mm
F	1 180 mm
G	2 500 mm
H	980 mm
H <sub>1</sub>	980 mm (Support blade)
I	4 430 mm
J	350 mm
K	300 mm
L	7 980 mm (2,0 m dipper arm)
L	7 920 mm (2,4 m dipper arm)
L <sub>1</sub>	6 040 mm (2,0 m dipper arm)
L <sub>1</sub>	6 060 mm (2,4 m dipper arm)
M	3 400 mm
M <sub>1</sub>	3 980 mm
N	1 910 mm
O	580 mm
P	3 080 mm (2,0 m dipper arm)
P	3 100 mm (2,4 m dipper arm)





## STANDARD EQUIPMENT

### Engine and Electrical System

Computer controlled monitoring system  
 Battery disconnecter and main fuel tap  
 3-step air filter:  
   precyclone  
   main filter  
   safety filter  
   with electronic service indicator  
 Hour meter  
 Revs counter  
 Fuel meter  
 Temperature meter for cooling fluid and hydraulic oil  
 Electric preheating element  
 24 volt electrical system with 4 standard batteries  
 Cranked exhaust pipe

### Undercarriage

Twin wheels 10.00–20 PR14  
 Stone protection rings  
 4-wheel drive  
 Dozer blade in front, and two outriggers rear  
 Oscillating front axle  $\pm 7^\circ$   
 Axles with hub reduction  
 2-circuit travel brakes

### Superstructure

Counterweight 2 500 kg

### Safety and Comfort

Safety bar for control levers  
 Hose rupture valve on boom cylinder  
 Hydraulic refueling pump, 90 l/min  
 Overload indicator  
 Electronic end position damper for boom  
 Lights:  
   headlights,  
   full and dipped beam  
   asymmetrical, halogen  
   Brakelights  
   Rear lights  
   Direction indicators  
   Rotating beacon  
   Hazard flashers  
   3 working lights, front, halogen  
   1 working light, rear, halogen  
   Instrument lighting  
   Illuminated cab, engine compartment and fuel filling compartment  
   Rear view mirrors: 1 interior  
   3 exterior (monobloc boom)  
   4 exterior (2-piece boom)  
   Cab heating with 14 outlets  
   Ergonomically designed and adjustable operator's seat, with heating coils

Adjustable steering wheel  
 Filtered air intake  
 Cab skylight  
 Sliding window in the cab door  
 Emergency exit through rear window  
 Tinted windows (clear front)  
 Internal sunvisor  
 Double intermittent windscreen wipers  
 Windscreen washers  
 Compressor horn  
 Radio console

### Hydraulics

Float position on boom  
 One variable power and pressure axial piston pump to slew circuit  
 One dual power controlled axial piston working pump  
 Mode selector, 3 steps  
 Power boost (HLD)  
 Standard filter cartridges for return, leak oil and breathing filter  
 Swing-out oil cooler  
 Hydraulic equipment for quickfit

### Equipment

4,9 m monobloc boom  
 2,4 m dipper arm  
 Hydraulic quickfit  
 End dampening on all cylinders  
 Security lifting hook  
 Friction welded piston rod eyes

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

### Engine and Electrical System

Electric over speed protector  
 Diesel driven engine and cab heater, with digital timer  
 Immersion heater, 220 V  
 Exhaust ejector  
 Oil bath precleaner for inlet air

### Undercarriage

Twin wheels  
 Single tyres  
 Solid tyres  
 Mud guards  
 Widening rings 2 x 50 mm  
 Oscillating outriggers plates  
 Dozer blade, rear  
 Tool box  
 Tow hook

### Safety and Comfort

Protective grid for front pane  
 Protective grid for roof pane (FOPS-approved)  
 Protective roof over cab (FOGS-approved)  
 Fire extinguisher  
 Seat belts  
 Protection against overfilling fuel  
 Extra circulation pump for the heating system  
 Extra hose rupture valves  
 Exterior glare shields  
 Rear window jalousie  
 Air conditioning  
 Micro filter for the cab  
 Radio and cassette player  
 Cruise controller

### Hydraulics

Biologically degradable oil  
 Hydraulic equipment for:  
   slope bucket  
   grab  
   hydraulic hammer  
   2-piece boom

### Equipment

5,0 m 2-piece boom  
 2,0 m dipper arm  
 Extra headlights on the boom  
 Hammer plate  
 Grab holder  
 Ripper tooth

*Under our policy of continuous product improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.*

# VOLVO

**Volvo Construction  
 Equipment**

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