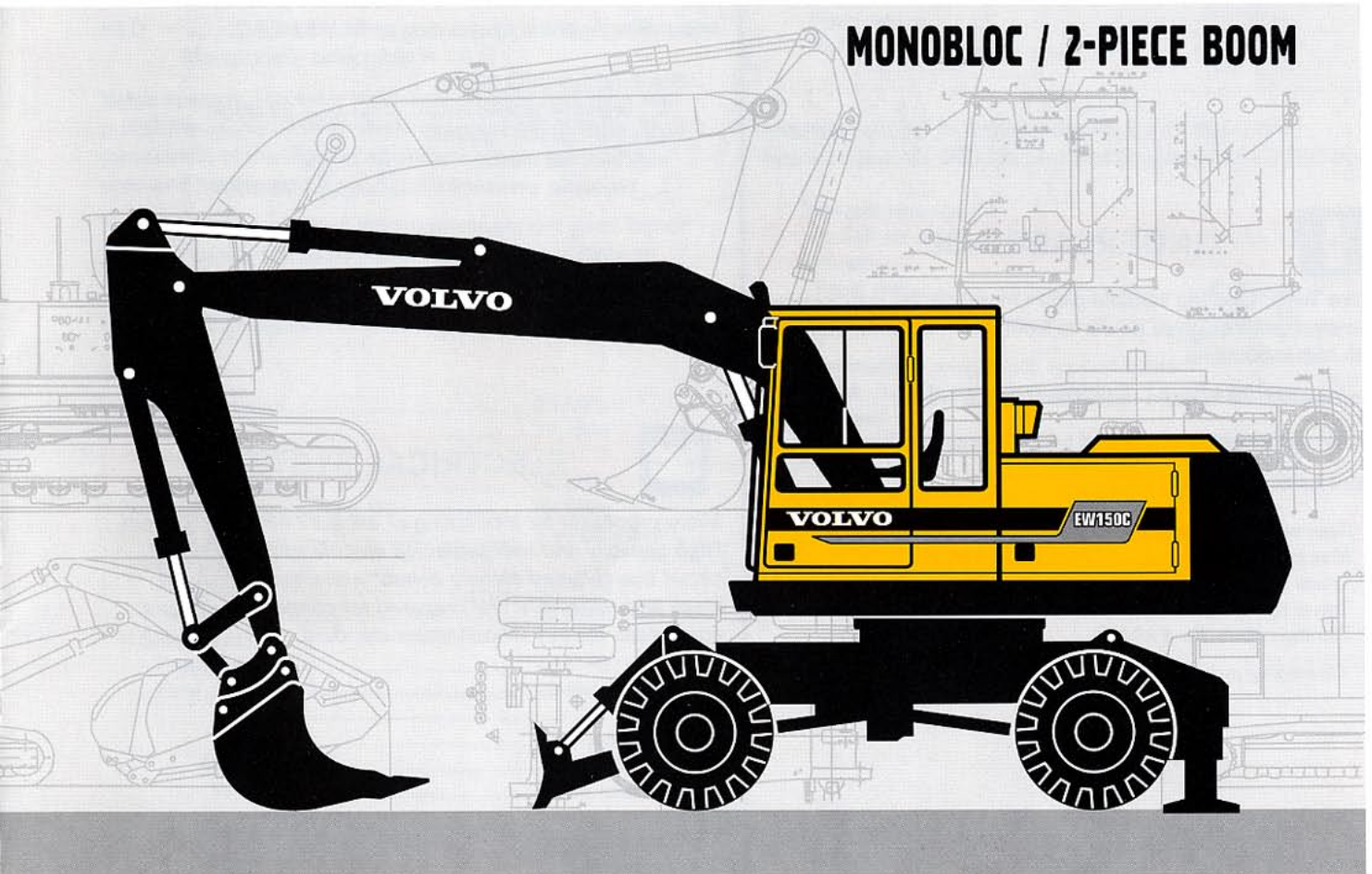


VOLVO EXCAVATOR

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_{WA} (acoustic power)	99 dB(A)
Inside the cab (ISO 6394)	
with the door closed	
L_{pA} (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												u = support up d = support down								
		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	u	d	u	d	u	d	u	d	Max. m
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)*

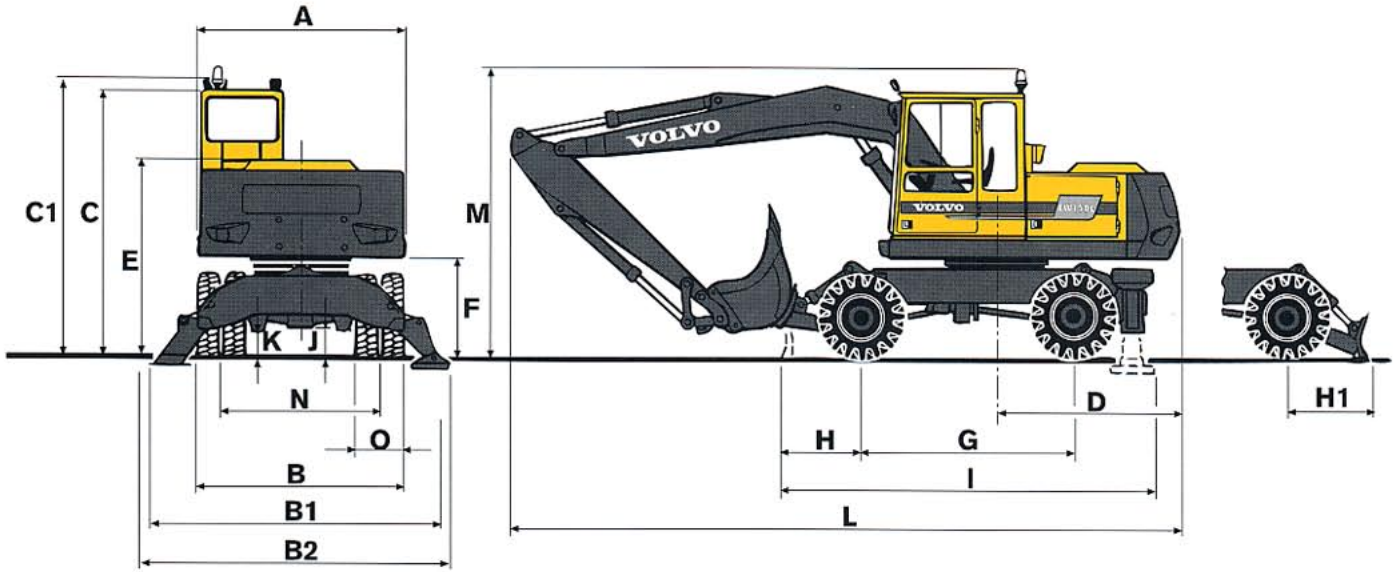
 Across carriage  Along carriage	Lifting hook related to ground level	Reach from machine center																Max. m				
		3,0 m				4,5 m				6,0 m				7,5 m					Max. reach			
		u		d		u		d		u		d		u		d			u		d	
5,0 m 2-piece boom 2,0 m arm Quickfit Outriggers and dozer blade	7,5 m					3,2*	3,2*	3,2*	3,2*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

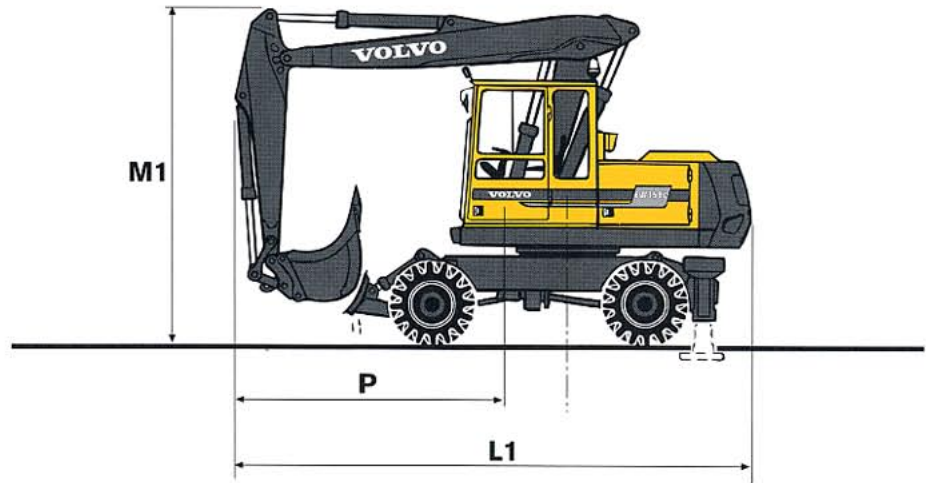
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with the machine on firm and level ground.

Working pressure with HLD = 34 MPa (340 bar)

DIMENSIONS



A	2 430 mm
B	2 500 mm
B ₁	3 520 mm
B ₂	3 530 mm
C	3 120 mm
C ₁	3 260 mm
D	2 170 mm
E	2 300 mm
F	1 180 mm
G	2 500 mm
H	980 mm
H ₁	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 ₁	6 040 mm (2,0 m dipper arm)
L ₁	6 060 mm (2,4 m dipper arm)
M	3 400 mm
M ₁	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**

Ref. No. 21 1 430 0107
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 BM-Tryck, Eslöv 1997

English
EXC