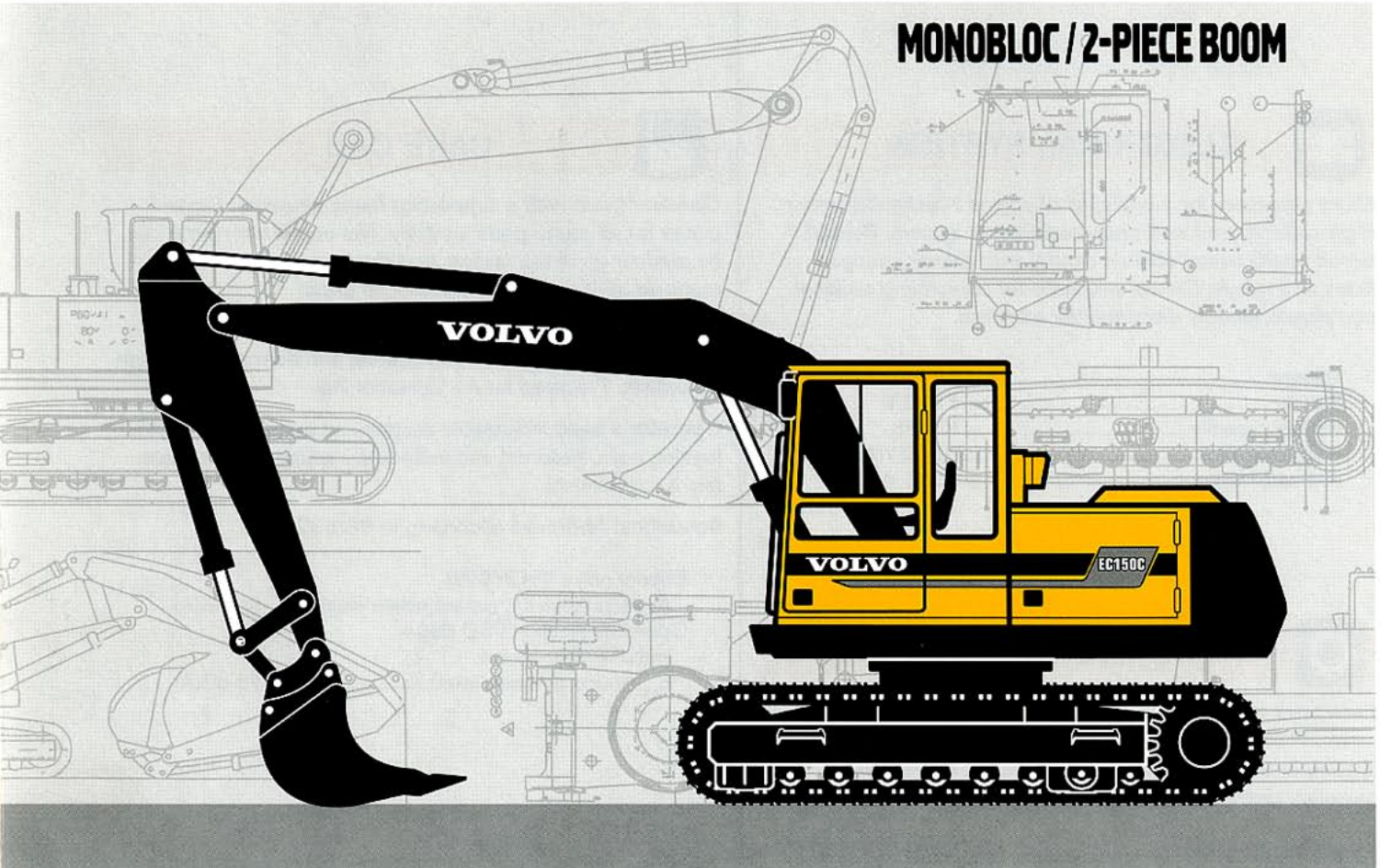


VOLVO EXCAVATOR

EC150C

MONOBLOC / 2-PIECE BOOM



- **Engine Power, gross:**
81 kW (110 hp)
- **Operating Weight:**
14,7 – 15,8 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
- Long undercarriage and heavy counterweight for high stability
- High travel speed – 5,4 km/h
- 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



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



DRIVE TRAIN

Each track is powered by a two-step axial piston hydraulic motor. The track brakes are of multidisc type and are spring applied and hydraulically released. Motor, brakes and planetary gears are fully enclosed in the crawler frame.

Max. tractive force	147 kN (108 kN)*
Max. travel speed	5,4 km/h
Gradeability, continuously	48,7° (114 %)

* Net



SERVICE REFILL CAPACITIES

Fuel tank	225 l
Fuel pump capacity	60 l/min
Hydraulic system, total	220 l
Diesel engine oil	8,1 l
Cooling system (incl. glycol)	35 l
Slew gearbox	15 l



UNDERCARRIAGE

Heavy duty box designed body with solid slew ring support. Lifetime lubricated rollers and front idlers.

Track chain size	B4HD
No. of track shoes	2 x 47
Track width	600 mm
alt.	750, 900 mm
No. of bottom rollers	2 x 8
Skid rail	2 x 2



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 coils, headrest and individually adjustable armrests and hand controls.

Acoustics: Approved according to 86/662/EEC.

Exterior noise (ISO 6393)	
Average value L_{wA} (sound power level)	99 dB(A)
Operators position (ISO 6394)	
with the door closed	
L_{pA} (sound pressure level)	75 dB(A)



SLEWING SYSTEM

The superstructure is slewed by an 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.



HYDRAULIC SYSTEM

3-circuit system all-servo controlled.

Pumps: P1 is a pressure and power controlled 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

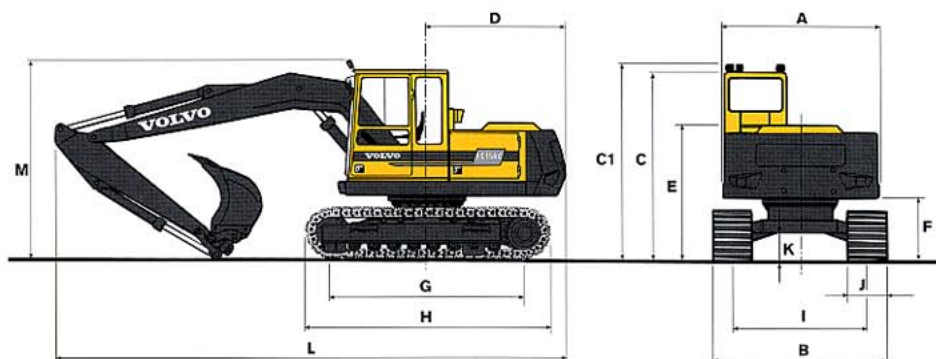
Max. flow 2 x 106 l/min

Servo pump

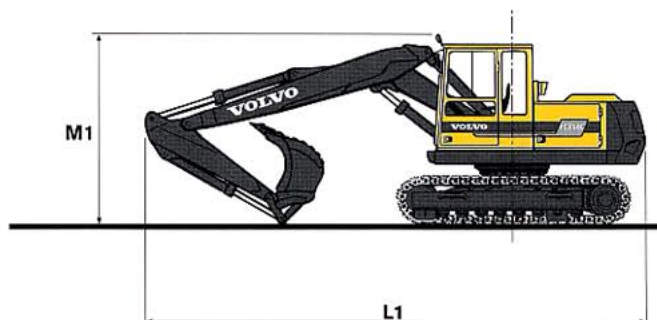
Pressure 6,5 MPa

Flow 23 l/min

DIMENSIONS

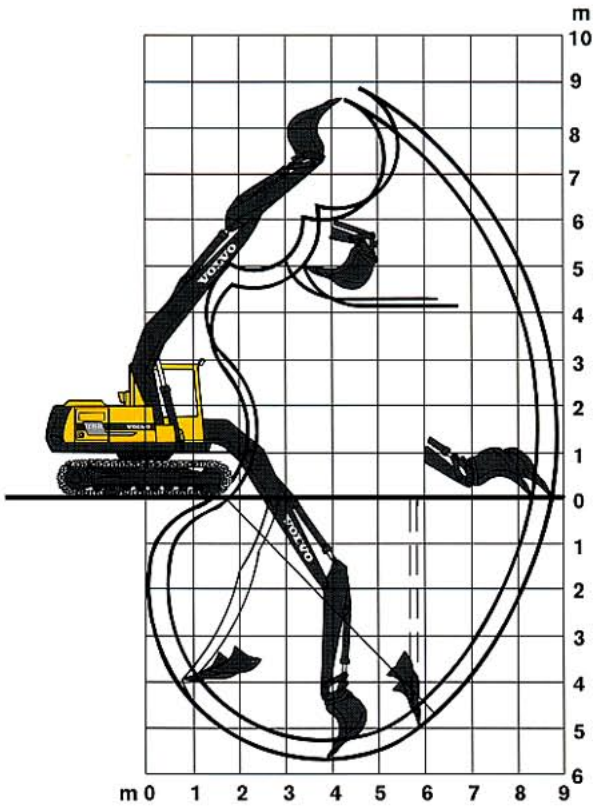


A	2 430 mm
B	2 700 /2 850/3 000 mm
C	2 900 mm
C1	3 040 mm
D	2 170 mm
E	2 080 mm
F	970 mm
G	3 030 mm
H	3 790 mm
I	2 100 mm
J	600 /750/900 mm
K	450 mm
L	8 000 mm
L1	8 060 mm (2,0 m arm)
L1	8 020 mm (2,4 m arm)
M	3 040 mm
M1	3 040 mm

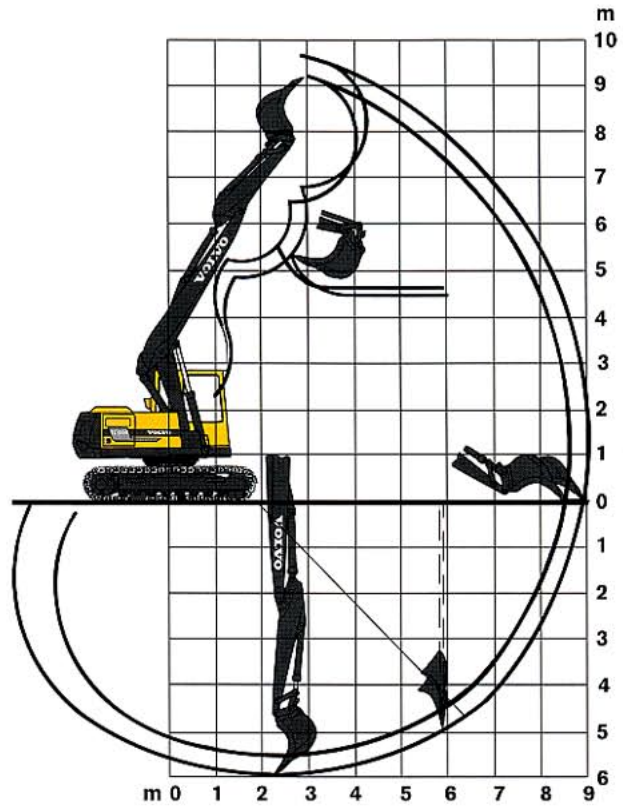


WORKING RANGES

4,9 m Monobloc boom



5,0 m 2-piece boom



Monobloc boom	m	4,9	4,9		
2-piece boom	m			5,0	5,0
Dipper arm	m	2,0	2,4	2,0	2,4
Max. reach	m	8,5	8,9	8,6	8,9
Max. reach at ground level	m	8,3	8,7	8,4	8,8
Max. digging depth	m	5,3	5,7	5,5	5,9
Max. height, ground					
– tooth tip	m	8,6	8,9	9,3	9,6
Max. dumping height	m	5,9	6,2	6,6	6,9
Max. practical dumping height	m	4,3	4,2	4,7	4,5
Practical digging depth for a material with a 45° angle of repose	m	4,3	4,7	4,4	4,7
Max. vertical digging depth	m	4,6	4,9	4,3	4,8
Min. slewing radius in front	m	3,0	3,1	2,6	2,8

DIGGING FORCE

Bucket digging force*	86 kN
Dipper arm force*	
with 2,0 m dipper arm	63 kN
with 2,4 m dipper arm	56 kN

* Bucket 700 l SAE and quickfit.

BUCKET AND ARM COMBINATIONS

BUCKETS for quickfit	Volume SAE l	Cutting width mm	Weight kg	Suitable for 4,9 m monobloc boom and arm		Suitable for 5,0 m 2-piece boom and arm	
				2,0 m	2,4 m	2,0 m	2,4 m
Backhoe buckets 1,8 t/m ³	500	930	390	•	•	•	•
	600	1 000	450	•	•	•	•
	700	1 070	490	•	•	•	•
Articulated slope bucket 1,5 t/m ³	450	1 400	500	•	•	•	•
	480	2 000	520	•	•	•	•
Cable bucket	160	400	270	•	•	•	•
	170	490	235	•	•	•	•
	290	600	320	•	•	•	•



WEIGHT AND GROUND PRESSURE

Machine with 4,9 m monobloc boom, 2,4 m dipper arm, hydraulic quickfit, 700 l bucket and counterweight 2 500 kg.













Machine with 5,0 m 2-piece boom, 2,4 m dipper arm, hydraulic quickfit, 700 l bucket and counterweight 2 500 kg.

Track shoes
600 mm
750 mm
900 mm

Operating weight	
14 700 kg	15 100 kg (2-piece boom)
15 050 kg	15 450 kg (2-piece boom)
15 400 kg	15 800 kg (2-piece boom)

Ground pressure		
36,4 kPa	37,4 kPa	(2-piece boom)
29,8 kPa	30,6 kPa	(2-piece boom)
25,4 kPa	26,1 kPa	(2-piece boom)

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		Max. m
												
Monobloc boom – 4,9 m 2,0 m arm Quickfit 600 mm track shoes	4,5 m			3,3*	3,3*	2,6	3,0*			2,1	2,9*	6,8
	3,0 m			3,7	4,1*	2,5	3,3*			1,8	2,4*	7,4
	1,5 m			3,5	5,0*	2,4	3,5	1,8	2,6	1,8	2,6	7,5
	0,0 m			3,4	5,2	2,3	3,4			1,8	2,6	7,4
	-1,5 m	6,4	7,2*	3,4	5,2*	2,3	3,4			2,0	2,9	6,8
	-3,0 m	6,3*	6,3*	3,4	4,4*					2,5	3,2*	5,8
Monobloc boom – 4,9 m 2,4 m arm Quickfit 600 mm track shoes	6,0 m					2,6*	2,6*			2,1*	2,1*	6,4
	4,5 m			3,0*	3,0*	2,6	2,7*			1,9	2,1*	7,3
	3,0 m			3,8*	3,8*	2,5	3,1*	1,8	2,6	1,7	2,0*	7,8
	1,5 m			3,5	4,7*	2,4	3,5*	1,7	2,6	1,6	2,4	7,9
	0,0 m			3,4	5,2	2,3	3,4	1,7	2,5	1,6	2,2*	7,8
	-1,5 m	6,3	6,5*	3,4	5,2	2,3	3,4			1,8	2,5*	7,3
2-piece boom – 5,0 m 2,0 m arm Quickfit 600 mm track shoes	6,0 m			3,8*	3,8*					2,7	3,0*	5,9
	4,5 m	5,6*	5,6*	4,1	4,2*	2,6	3,5*			2,1	2,8*	6,9
	3,0 m			3,7	4,8*	2,5	3,7	1,8	2,2*	1,8	2,2*	7,5
	1,5 m			3,5	5,3*	2,4	3,5	1,7	2,6	1,7	2,5	7,6
	0,0 m			3,3	5,1*	2,3	3,4	1,7	2,4*	1,7	2,4*	7,5
	-1,5 m	5,6*	5,6*	3,3	4,5*	2,2	3,3*			1,9	2,6*	6,9
2-piece boom – 5,0 m 2,4 m arm Quickfit 600 mm track shoes	7,5 m			3,4*	3,4*					2,5*	2,5*	4,9
	6,0 m			3,5*	3,5*	2,7	3,2*			2,1*	2,1*	6,5
	4,5 m	4,2*	4,2*	3,9*	3,9*	2,6	3,3*			1,9	2,0*	7,4
	3,0 m			3,8	4,6*	2,5	3,6*	1,8	2,6	1,6	1,9*	7,9
	1,5 m			3,5	5,2*	2,4	3,5	1,7	2,6	1,6	2,3*	8,0
	0,0 m			3,3	5,2	2,3	3,4	1,7	2,5	1,6	2,0*	7,9
	-1,5 m	6,2	6,2*	3,3	4,7*	2,2	3,4			1,7	2,4*	7,4
	-3,0 m			3,3	3,5*	2,2	2,5*			2,1	2,1*	6,4

* 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)

STANDARD EQUIPMENT

Engine and Electrical System

Computer controlled monitoring system
 Battery disconnecter and main fuel tap
 3-step air filter:
 preyclone
 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

600 mm track shoes with mud holes
 Triple grousers
 Hydraulic track adjuster
 Derailing shields, 3 pcs/side
 Skid rails

Superstructure

Counterweight 2 500 kg

Safety and Comfort

Safety bar for control levers
 Hose rupture valve on boom cyl.
 Hydraulic refueling pump, 60 l/min
 Overload indicator
 Electronic end position damper for boom
 Lights (halogen):
 5 working lights, front
 1 working light, rear
 Instrument lighting
 Illuminated cab, engine compartment and fuel filling compartment
 Rear view mirrors: 1 interior
 3 exterior (monobloc boom)
 4 exterior (2-piece boom)
 Ergonomically designed and adjustable operator's seat, with heating coils
 Cab heating with 14 outlets
 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 controlled 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

750 and 900 mm track shoes
 Dozer blade, front

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
 Rotating beacon
 Rear lights
 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

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
 Ripper tooth
 Hammer plate
 Grab holder

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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