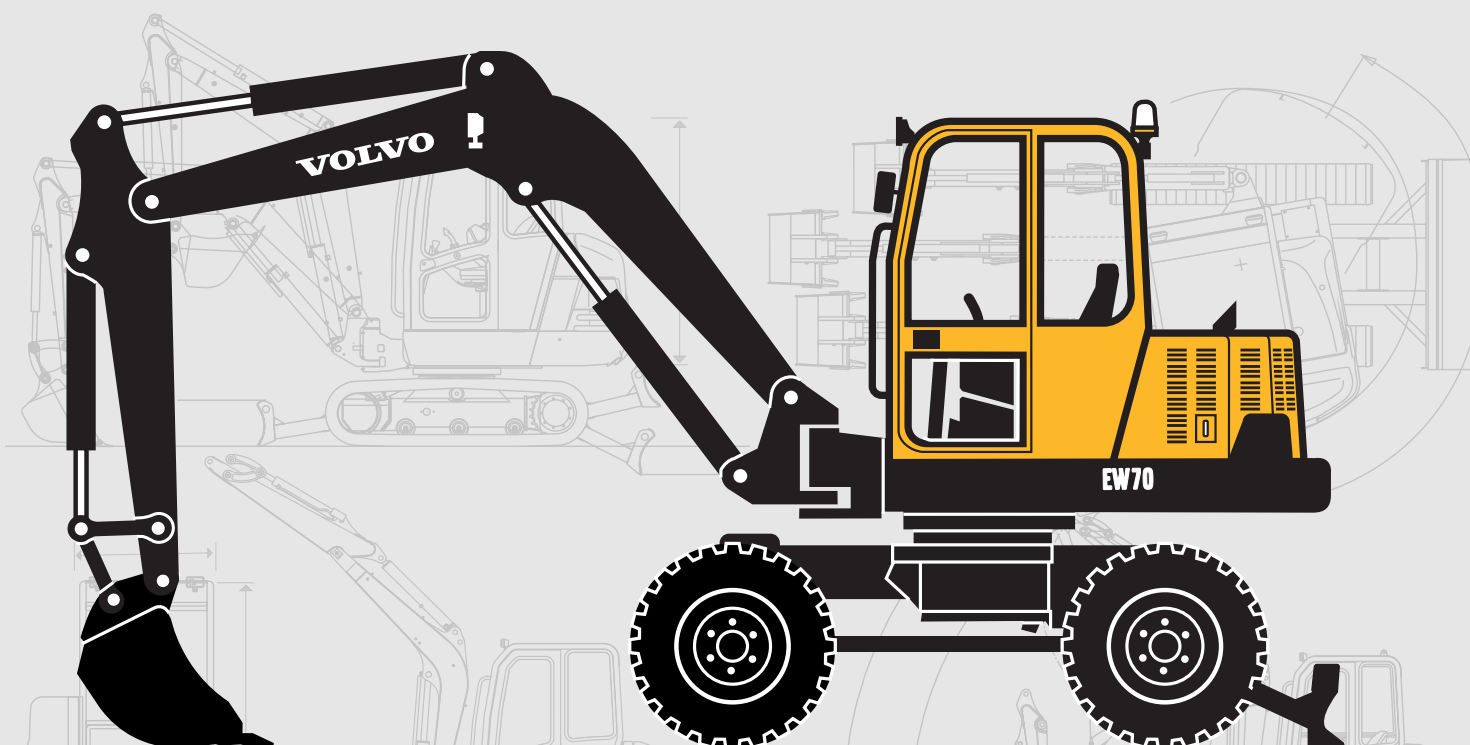


VOLVO COMPACT EXCAVATOR

EW70



- **Net Power :**
SAE J1349 / ECE-R24 :
41.2 kW / 56 hp

- **Operating Weight :**
7250 - 7395 kg

- **Bucket Capacities :**
103 - 306 l.

- **Maximum Digging Depth :**
3590 - 3990 mm

- **Load Sensing Hydraulic System**
for very precise controls under all
load conditions.

- **Simultaneous digging
movements and high speed
operations** for faster cycle times
and increased productivity.

- **FOPS** cab for a better
operator safety.

- **Compact dimensions.**
Wrap-around counterweight
protects the rear compartment
against all impacts.

- **Excellent serviceability** thanks to
easy access to the engine and
hydraulics compartments.

VOLVO

More power, more profitability

COMPACT EXCAVATOR EW70

With its exceptional power and stability, and its extraordinary sturdiness, the wheeled Volvo EW70 works with maximum speed and efficiency on the most difficult sites. Its high degree of mobility, its remarkable quietness and its compact dimensions make it the ideal machine for all public works applications. A Volvo tradition, this machine meets a strict specification with a single objective : to make a difference on the site.



A unique feature : the quick coupling system available as an option enables bucket or accessory to be changed without the operator leaving the cab. Appreciated by all users, this device saves a lot of time and increases comfort considerably without altering the bucket's performances or sequence of operations.



An anti-theft keypad, available as an option, enables machine starting and the main hydraulic functions to be locked.



The wrap-around shape of the counterweight protects the back of the machine perfectly and makes it possible to work on the narrowest sites.



All the hydraulic hoses are sheathed and free of any friction or wear and are connected at the bottom of the boom for very quick replacement, if necessary. The boom is mounted on a double-swivel articulated pivot which enables a long pin to be mounted and provides greater rigidity in the boom-chassis link. The boom cylinder's rod is fully protected against any knocks by sturdy armoring.



Very effective corrosion protection : all the nuts and bolts, the pins and the hydraulic pipes are zinc-plated.



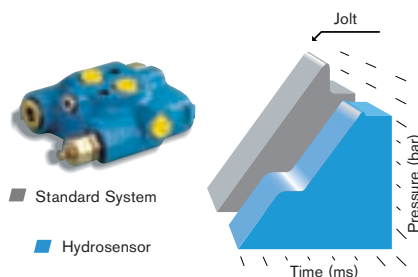
Thanks to its compact dimensions and the boom's hydraulic offset, the EW70 is at ease in all site configurations, even alongside a wall.

Precision and flexibility of the Load-Sensing

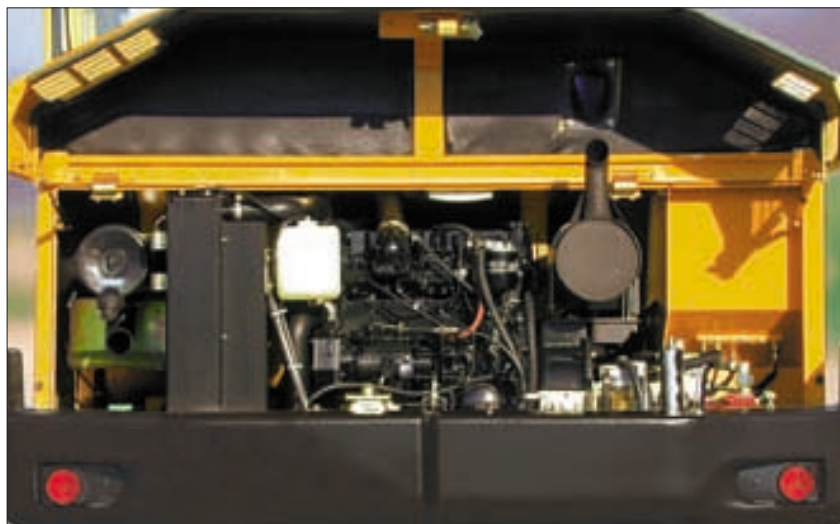
COMPACT EXCAVATOR EW70



A unique feature : he radial piston slow slewing motor. This motor has a very high starting torque for flexible manoeuvres, and drives the crown directly without a mechanical reducer. The result is fewer moving parts and therefore less risk of wear. The automatic hydraulic brake integrated in the slewing motor immobilises the turret in all positions and guarantees optimum working safety even on a slope.



The hydrosensor valve on the slewing circuit damps the pressure peaks and hydraulic shocks common on starting and stopping on conventional circuits. The result : a progressive pressure increase, greater flexibility and precision, less stressed and therefore more reliable mechanical parts.



The back cover opens completely, giving excellent access to the engine and hydraulic pumps. All maintenance and checking points are conveniently located close to hand.



A wide central cover gives excellent access to a service platform where all the machine's hydraulic components are grouped together. Access to the control valves, rotating joint and slewing motor is immediate, which greatly facilitates all maintenance operations.

- Continuous and immediate load sensing control of the hydraulic pump's flow and pressure to suit the work done by the excavator.
- All hydraulic functions are independent and can be operated simultaneously : more operating comfort and productivity.
- Control valves with closed centre : pump flow zero on standby, no unnecessary oil circulation. No loss of power or deterioration of oil by overheating.
- Hydraulic power continuously adapted to suit the load : optimum use of the engine's power.
- Straight-line travel maintained even when the equipment or the turret are moving : more safety
- Excellent precision of the controls, even with a large load : safety of handling work.
- Hydraulic priority on braking and steering circuits : more safety.
- Four-speed hydrostatic transmission.

A very high level of comfort and safety



The side consoles supporting the manipulators are rigidly linked to the seat's suspension : operating precision is independent of the machine's movements and the operator is sure of finding an operating position ideally suited to him.



The PUMA system on the EW70 continuously monitors all the machine's vital functions and immediately informs the operator if there is a fault. The operator is therefore free to concentrate fully on operating the machine.



Operator comfort is a priority for Volvo. The operator's cab is spacious and easily accessible. The hydraulic controls are power-assisted and very progressive for more flexibility and precision. Volvo's ergonomic manipulators feel good and are complemented by side arm rests which give a natural and very comfortable operating position.

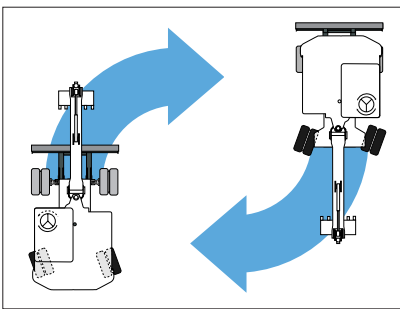
The EW70's cab and canopy have a very high level of safety, guaranteed by the FOPS 1 certification (Falling Object Protection Structure). The seatbelt is part of the standard equipment.

Incomparable Power

COMPACT EXCAVATOR EW70



The steering front axle is oscillating with an angle of 15° in order to travel over all terrains. A hydraulic oscillation locking device ensures perfect stability of the excavator in all positions.



The Auto-Reverse system, available as an option, automatically reverses the steering direction when the excavator is facing the back. Thanks to this exclusive system, the wheels are always oriented in the direction of rotation of the steering wheel, for greater precision and safety in operation.

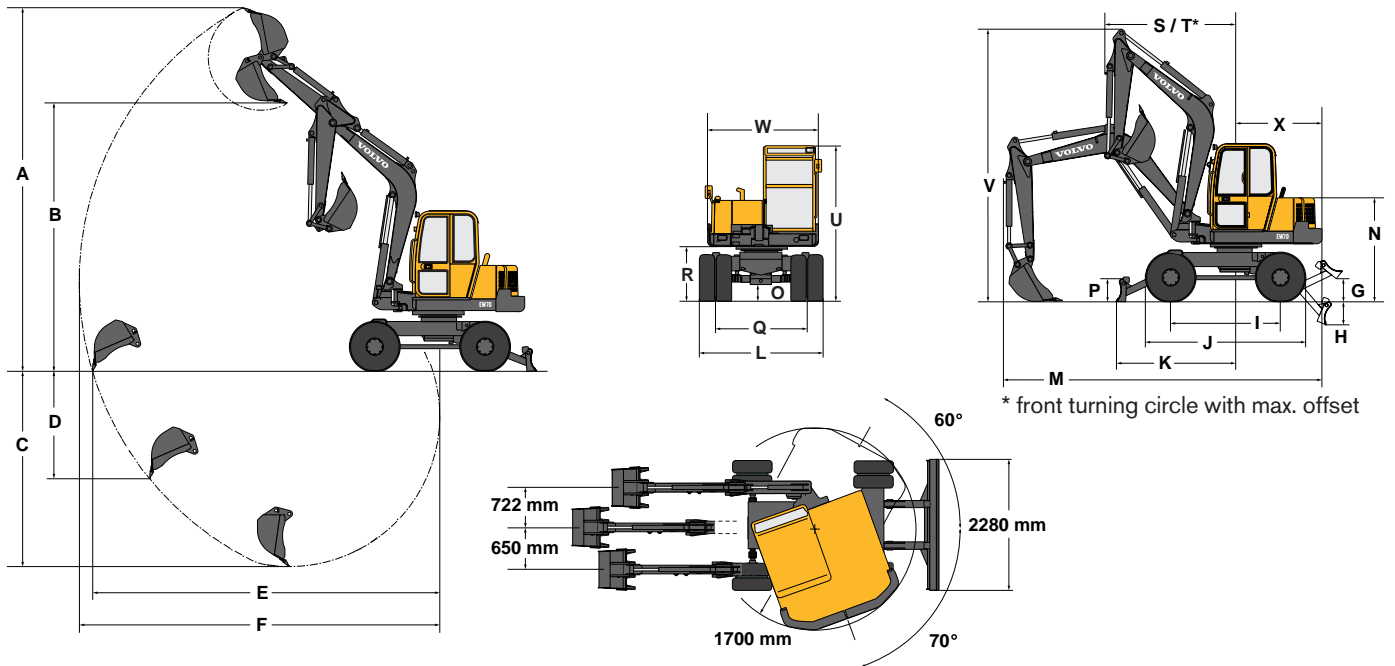


The EW70 is equipped as standard with a sturdy blade controlled by two rams fitted with safety valves. This can be replaced by two separately controlled stabilisers to which a removable blade can be added (optional equipment).



The articulated boom increases the EW70's versatility. The boom's additional joint reduces the equipment's overall dimensions and makes it possible to position the bucket on a larger ground surface, even in the immediate proximity of the machine.

DIMENSIONS - SINGLE-PIECE BOOM



Buckets	Width	Weight	Capacity
	380 mm	112 kg	103 l
	450 mm	126 kg	130 l
	600 mm	155 kg	188 l
	750 mm	175 kg	246 l
Ditch bucket	1500 mm	190 kg	265 l

Dipper	A	B	C	D	E	F
1800 mm	6702	4950	3583	1941	6354	6632
2200 mm	6970	5218	3983	2284	6784	7014

G	H	I	J	K	L	M	N	O
722	162	2050	3042	1700	2266	5893	1960	361

P	Q	R	S	T	U	V	W	X
380	1760	1105	2430	2026	2963	5074	2050	1585

With standard tires

in mm

LOAD CAPACITIES - SINGLE-PIECE BOOM

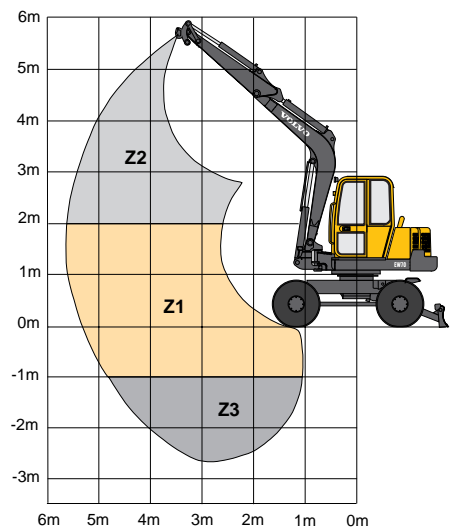
These capacities are given for a machine without a bucket or quick-release coupling. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit. Caution : In accordance with standard EN 474-5, the machine must be equipped with a safety valve on the boom ram and an overload indicator (available as options) to carry out handling operations with EN standard 474-5.

Horizontal Range		2.50 m	3.00 m	4.00 m	5.00 m	max 5.5 m	
		Z2	2800*	1665*	1185*	1285*	
		Z1	2625*	2730*	1840	1345	1200
		Z3	3130	2435	1850		
		Z2	2650	1665*	1185*	940	815
		Z1	2325	1790	1210	905	800
		Z3	2380	1815	1225		

Horizontal Range		2.50 m	3.00 m	4.00 m	5.00 m	max 6.0 m	
		Z2	2970*	1685*	1065*	1140*	965*
		Z1	2970*	2795*	1670*	1320	885*
		Z3	3825	2815	1810	1325	
		Z2	2550	1685*	1065*	930	700
		Z1	2280	1750	1185	880	690
		Z3	2310	1765	1185	885	

* hydraulic limit

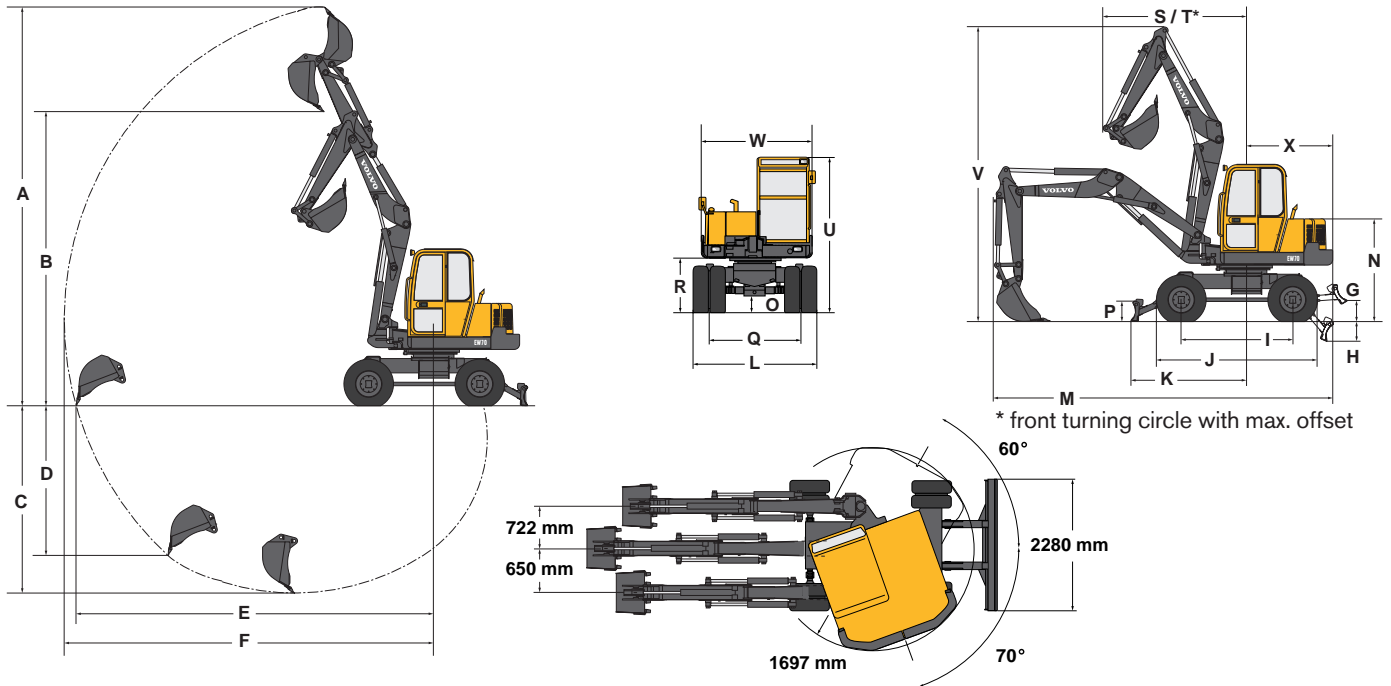
in kg



Lifting capacity in total rotation over 360° with the blade or the stabilizers resting on the floor.

Lifting capacity in total rotation over 360° with the blade or the stabilizers raised.

DIMENSIONS - ARTICULATED BOOM



Buckets	Width	Weight	Capacity
	380 mm	112 kg	103 l
	450 mm	126 kg	130 l
	600 mm	155 kg	188 l
	750 mm	175 kg	246 l
Ditch bucket	1500 mm	190 kg	265 l

Dipper	A	B	C	D	E	F
1800 mm	7615	5680	3590	2870	6750	7016
2200 mm	7985	6048	3990	3210	7154	7415

G	H	I	J	K	L	M	N	O
722	162	2050	3042	1700	2264	6180	1960	291

P	Q	R	S	T	U	V	W	X
380	1760	1105	2550	2140	2963	5386	2050	1585

With standard tires

in mm

LOAD CAPACITIES - ARTICULATED BOOM

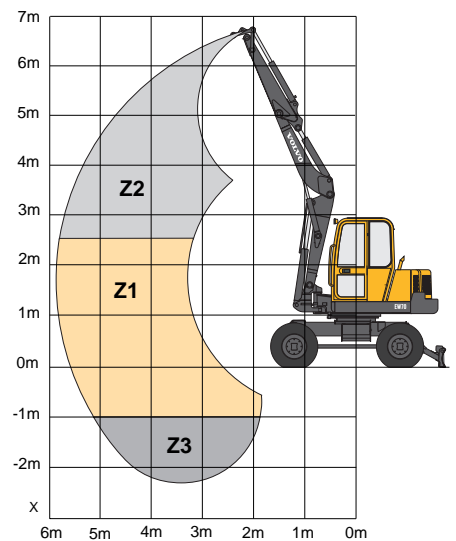
These capacities are given for a machine without a bucket or quick-release coupling. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit. Caution : In accordance with standard EN 474-5, the machine must be equipped with a safety valve on the boom ram and an overload indicator (available as options) to carry out handling operations with EN standard 474-5.

Horizontal Range		2.50 m	3.00 m	4.00 m	5.00 m	max 6 m	
		Z2	1640*	1440*	1000		
		Z1	2630	1935	1275	740	
		Z3	2660	1970	1290	960	
		Z2	1640*	1315	940		
		Z1	2390	1775	1185	875	690
		Z3	2425	1810	1195	895	

Horizontal Range		2.50 m	3.00 m	4.00 m	5.00 m	max 6.4 m	
		Z2	1910*	1215*	1015		
		Z1	2820*	1930	1270	935	670
		Z3	2620	1945	1275	940	
		Z2	1910*	1215*	870		
		Z1	2140	1610	1070	790	565
		Z3	2165	1625	1075	795	

* hydraulic limit

in kg



Lifting capacity in total rotation over 360° with the blade or the stabilizers resting on the floor.

Lifting capacity in total rotation over 360° with the blade or the stabilizers raised.



ENGINE

Water-cooled 4-cylinder Mitsubishi S4S diesel engine.

Displacement, total3331 cc
Power, installed
(SAE J1349 / ECE-R24)41.2 kW (56 hp) at 2200 r/min
Maximum torque (SAE J1349)196 Nm at 1550 r/min
Bore x stroke94 mm x 120 mm



ELECTRICAL SYSTEM

Rated voltage12 V
Battery capacity12 V - 90 Ah
Alternator rating12 V - 50 A
Starter motor output12 V - 2.2 kW



HYDRAULIC SYSTEM

Closed centre Load Sensing hydraulic system providing total independence of each movement.

Controlpower-assisted hydraulic controls

Variable displacement Load Sensing pump for all the equipment and travel circuits :

Maximum flow160 l/min
Maximum operating pressure25 MPa (250 bars)

Gear pump for the circuit of the blade and slewing :

Maximum flow60 l/min
Maximum operating pressure26 MPa (260 bars)

Double-acting hydraulic circuit for accessories :

Maximum flow90 l/min
Maximum operating pressure25 MPa (250 bars)

End-of-stroke cushioning

On boom ramat the end of the rod extension
On dipper ramat the end of the rod retraction



SLEWING SYSTEM

360° slewing is provided by a radial piston hydraulic motor which drives directly (without a reduction gear) a ball internal crown wheel with remote lubrication.

Slewing speed11 r/min
Turntable brakingautomatic multi-disc brake
Absorption of hydraulic shocksHydrosensor shockless valve



BUCKET PERFORMANCE

Breakout force5190 daN
Tearout force3450 daN



UNDERCARRIAGE

Hydrostatic transmission with reverser and driving of the four drive wheels by transfer box and two rigid axles.

Two slow speeds3.5 and 6.5 kph
Two fast speeds12 and 20.5 kph
Max. tractive force3100 daN
Maximum permitted slope5.8% (30°)
Standard twin wheels8.25 x 20

Power-assisted hydrostatic steering with Autoreverse device available as an option.

Outside turning radius5500 mm

Braking system.

Service brakemultiple disc on all 4 wheels
Parking and emergency brakeon the front axle

Stabilisation system.

Stabilising bladestandard
Two stabilisers in place of the bladeoption
Removable blade on the stabilisersoption

The stabiliser or blade rams are equipped as standard with safety valves.



SERVICE FILL CAPACITIES

Fuel tank110 l
Hydraulic system, total73 l
Hydraulic tank131 l
Engine oil10 l
Cooling system15 l



WEIGHT

Operational weight with standard bucket and blade :

With single-piece boom7250 kg
With articulated boom7395 kg



NOISE LEVELS

Results of dynamic measurements :

Noise level exterior (LwA)101 dB(A)
Noise level in the cab (LpA)83 dB(A)

The noise levels conform to directive n° 86/662 EEC and its amendments.

STANDARD EQUIPMENT

Engine

Dry-type air filter.
Electric pre-heating device.
Transparent diesel oil filter, pre-filter and sediment chamber.
Oil sump sheet metal guard.
Continuous adjustment of engine speed.

Electrical system

12 V - 90 Ah battery.
Horn.
12 V power socket for inspection lamp.

Undercarriage

Twin wheels fitted with 8.25 x 20 tyres.
Stabilisation and backfilling blade with two rams equipped with safety valves.
Hydrostatic transmission with 4 drive wheels.
Remote lubrication of the slewing crown wheel.

Hydraulic system

ISO power-assisted hydraulic control.
Additional double-acting hydraulic control valve for an attachment circuit with folding control pedal and circuit for direct return of oil to the hydraulic tank.
Attachment circuit piping (double-acting + return) as far

as the bottom of the boom.
Power-assisted control of the hydraulic offset of the boom by the left control lever.

Cab

Level 1 FOPS (Falling Objects Protective Structure).
Multi-adjustable sprung consoles-seat assembly.
Fabric-covered superior comfort seat.
Non-slip floor with two foot rests.
Grab handles for access to the driver's cab.
Seat belt.
Cab mounted on rubber mountings.
Three working lights.
Two-speed heating and ventilation.
Cab heating adjustment.
Windscreen with opening system power-assisted by two gas rams.
Sliding window (right).
Door stops.
Provision for a radio (location for a radio and two speakers, aerial and electric wiring already fitted).
Interior lighting.
Anti-corrosion protection of the cab by electrophoresis.
Windscreen wiper and washer (front).

Instrumentation and monitoring

PUMA on-board message transfer control circuit providing continuous monitoring of the machine.
Monitoring and warning light for the following functions :
pre-heating, engine oil pressure, water temperature, hydraulic oil temperature, battery charging, hydraulic filter restriction, air filter restriction.
Fuel gauge with minimum level warning light.
Total elapsed hour meter.
Partial elapsed hour meter with controlled reset.
Rev. counter.
Display of machine's serial number (anti-theft marking).

Handling and earthwork equipment

3100 mm long monobloc boom or articulated boom.
1800 mm dipper.
130° hydraulic boom offset.
Cushions on the boom and dipper rams.
Remote lubrication of the bottom of the offset ram.

Safety

Device for locking the earthwork equipment's controls when the left console is raised to gain access to the driver's cab.
Engine starting safety device : the left console must be raised to operate the starter.
Pressure accumulator on the power assistance circuit in order to be able to put the equipment on the ground if the engine is switched off.
Key-lockable toolbox.

Official approval

Machine conforming to directive n° 98/37 EEC and its amendments.
Soundproofing conforming to directive n° 86/662 EEC and its amendments.
FOPS 1 conforming to ISO standard 3449.SW
Electromagnetic compatibility (EMC) conforming to directive n° 89/336 EEC and its amendments.

OPTIONAL EQUIPMENT

Working equipment

Long dipper (2200 mm).
Handling device safety valve piloted by the power assistance circuit on the boom ram and overload indicator conforming to EN standard 474-5.
Safety valve on the dipper ram.
Hydraulically-controlled quick-release attachment coupling.

Hydraulic circuits for attachments

Circuit for hydraulic breaker with direct return to the tank.
Hydraulic circuit for double-acting attachments.
Hydraulic circuit for operating a clam-shell bucket (opening/closing and rotation of the bucket).

Undercarriage

Right/left independently-controlled stabilisers in place of the blade.

Removable blade mounted on the stabilisers.

Lighting

Additional working light on the boom.
Additional rear working light.
Revolving light.

Environmental protection

Bio-degradable hydraulic oil.

Comfort and safety

Radio.
Anti-theft system (2 programmable codes).
Electric circuit-breaker.

Service and maintenance

Tool kit.

Miscellaneous

Special customised paint (RAL specifications).

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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