

# Åkerman EW200

## Monobloc / 2-piece boom



- **Engine Power:**  
107 kW (145 hp)
- **Operating Weight:**  
16,9 – 18,0 t
- **Buckets:**  
725 – 1100 l
  
- *Direct injection, turbocharged Volvo diesel engine*
- *Åkerman three-circuit multilevel priority hydraulic system*
  - *COS = Capacity Optimized system – all three pumps for the digging movements. Mode Selector and pump regulation PSC. (Pressure Sensing Control)*
- *Comfort cab*
  - *computerized control and warning system*
  - *ergonomic environment*
  - *low sound level*
  - *filtered air*
- *Highest flexibility for extra equipment/hydraulics*
- *Four travel speeds – max. 30 km/h*
- *Individually operated outriggers and dozer blade*

## ENGINE



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

Make		Volvo
Model		TD 61 GE
Net output at ISO 3046 / DIN 6271*	r/s (r/min)	30 (1800)
	kW (hp)	107 (145)
No. of cylinders		6
Displacement, total	l	5,48
Bore	mm	98,43
Stroke	mm	120

\* Fan excluded

## UNDERCARRIAGE



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

**Framework and supports:** All-welded robust torsion box frame with two outriggers on rear end and a dozer blade on the front end. These 3 supports can by choice be operated separately or simultaneously for quick re-positioning.

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

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

Twin wheels, standard		10.00 - 20 PR14
Max tractive force	kN	114
Travel speed, road travel	km/h	0 - 30
Travel speed, site travel	km/h	0 - 7
Turning radius, front wheels	m	8,0

## 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.

## CAB



Operator's cab with a supporting frame structure. Large panes for all round good visibility. The upper front pane can be pushed up under 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) 104 dB(A)

Operators position (ISO 6394)

with the door closed

$L_{pA}$  (sound pressure level) 74 dB(A)

## ELECTRIC 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 connection optional equipment. Battery disconnecter standard.

Voltage	V	24
Battery	V	4 x 12
Battery capacity	Ah	120
A.C. Generator	V/A	28/55
Alternator rating	W	1540

## SERVICE REFILL CAPACITIES



Fuel tank	l	290
Fuel pump capacity	l/min	90
Hydraulic system, total	l	320
Diesel engine (lubricating oil)	l	22
Cooling system (incl. glycol)	l	32
Slew gearbox	l	16,0
Travel gearbox	l	4,0

## HYDRAULIC SYSTEM AND SLEWING SYSTEM



### Åkerman 3-circuit multilevel priority system all-servo controlled.

**Pumps:** P1 is a pressure controlled variable pump with priority to slew circuit. P2 and P3 are power and pressure controlled variable pumps with opposite cross flow priority to boom, bucket and arm.

**Mode selector:** Three working modes:

**HLD** = Heavy Lift Device

**ECO** = Economy

**CAP** = Capacity

Powerboost temporarily selectable in 10 seconds in Economy and Capacity mode.

**Valve system:** Boom, arm and bucket are operated by dual main valves to obtain best combination of precision manoeuvrability and minimized fuel consumption. Boom cylinder equipped with floating position valve for improved comfort and increased digging speed. Security hose rupture valve on the boom cylinder.

Pump P1			
Max. pressure	MPa		28
Max. flow	l/min		64
Pumps P2 and P3			
Max. pressure	MPa		26
Power boost	MPa		30
Max. flow	l/min		2 x 114
Servo pump			
Pressure	MPa		6,5
Flow	l/min		24
Steering pump			
Pressure	MPa		14
Flow	l/min		29



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	s		5,0
180° turn	s		7,0
Slew speed	r/min		7,9

\* Empty bucket and extended equipment.

## WEIGHT AND AXLE LOAD



Machine with **4,65 m monobloc boom**,  
2,4 m dipper arm, quickfit, 825 l bucket and  
2 600 kg counterweight.

Total machine weight with outriggers and dozer blade	kg	17 350
Axle load		
Front axle	kg	7 950
Rear axle	kg	9 400



Machine with **5,2 m monobloc boom**,  
2,4 m dipper arm, quickfit, 950 l bucket and  
2 600 kg counterweight.

Total machine weight with dozer blade	kg	17 500
Axle load		
Front axle	kg	7 700
Rear axle	kg	9 800





Machine with **5,1 m 2-piece boom**,  
2,4 m dipper arm, quickfit, 900 l bucket and  
2 600 kg counterweight.

Total machine weight with dozer blade	kg	18 000
Axle load		
Front axle	kg	7 600
Rear axle	kg	10 400

Total machine weight (excl. dozer blade)	kg	17 400
Axle load		
Front axle	kg	6 750
Rear axle	kg	10 650

# LIFTING CAPACITIES

In the quickfit lifting hook without bucket. Unit: 1000 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		u	
4,65 m monobloc boom 2,4 m dipper arm Quickfit Outriggers and dozer blade Counterweight 2600 kg	7,5 m																							
	6,0 m							2,8	3,6*	2,8	3,6*							2,2	2,5*	2,2	2,5*		6,8	
	4,5 m					4,2	4,3*	4,1	4,3*	2,7	3,9*	2,7	3,9*	1,9	3,1*	1,8	3,1*	1,8	2,5*	1,8	2,5*		7,6	
	3,0 m					3,9	5,7*	3,8	5,7*	2,6	4,5*	2,5	4,5*	1,8	3,2	1,8	3,9*	1,6	2,6*	1,6	2,6*		8,0	
	1,5 m					3,5	6,7	3,4	7,0*	2,4	4,3	2,3	5,0*	1,7	3,1	1,7	4,1*	1,5	2,3*	1,5	2,3*		8,1	
	0,0 m					3,4	6,5	3,3	7,3*	2,3	4,2	2,2	5,3*	1,7	3,1	1,7	4,1*	1,6	2,9	1,6	3,0*		7,8	
	-1,5 m	6,3		6,0		3,4	6,5	3,3	6,9*	2,3	4,2	2,2	5,0*					1,8	3,0*	1,8	3,0*		7,2	
-3,0 m	6,4		6,1		3,4	5,5*	3,4	5,5*	2,4	3,6*	2,3	3,6*					2,3	3,1*	2,3	3,1*		6,1		
4,65 m monobloc boom 2,8 m dipper arm Quickfit Outriggers and dozer blade Counterweight 2600 kg	7,5 m																							
	6,0 m							2,5	3,2*	2,7	3,2*							1,8	2,4*	1,9	2,4*		7,2	
	4,5 m					3,8	3,8*	3,8*	3,8*	2,4	3,6*	2,6	3,6*	1,6	3,3	1,8	3,5*	1,4	2,1*	1,5	2,1*		8,0	
	3,0 m					3,5	5,2*	3,7	5,2*	2,3	4,2*	2,4	4,2*	1,6	3,2	1,7	3,7*	1,3	2,0*	1,4	2,0*		8,4	
	1,5 m					3,1	6,6*	3,3	6,6*	2,1	4,3	2,2	4,8*	1,5	3,1	1,6	4,0*	1,2	1,8*	1,3	1,8*		8,5	
	0,0 m	5,1	6,0*	5,4	6,0*	2,9	6,5	3,1	7,2*	2,0	4,2	2,1	5,2*	1,4	3,0	1,5	4,1*	1,3	2,4*	1,4	2,4*		8,2	
	-1,5 m	5,3	10,2*	5,5	10,2*	2,9	6,4	3,0	7,0*	1,9	4,1	2,1	5,1*	1,4	3,0	1,5	3,6*	1,4	2,8*	1,5	2,8*		7,6	
-3,0 m	5,4	8,8*	5,7	8,8*	2,9	5,9*	3,1	5,9*	2,0	4,2	2,1	4,2*					1,8	2,9*	1,9	2,9*		6,6		
5,2 m monobloc boom 2,4 m dipper arm Quickfit Outriggers and dozer blade Counterweight 2600 kg	7,5 m									2,5	3,3*	2,6	3,3*					2,3	3,0*	2,5	3,0*		6,2	
	6,0 m									2,5	3,2*	2,6	3,2*					1,7	3,1*	1,8	3,1*		7,4	
	4,5 m					3,7	4,3*	3,9	4,3*	2,4	3,6*	2,5	3,6*	1,6	3,2	1,7	3,3*	1,4	2,6*	1,5	2,6*		8,2	
	3,0 m					3,2	5,7*	3,4	5,7*	2,2	4,3*	2,3	4,3*	1,5	3,1	1,6	3,6*	1,2	2,6	1,3	3,1*		8,5	
	1,5 m					2,9	6,4	3,1	6,8*	2,0	4,2	2,1	4,8*	1,4	3,0	1,6	3,9*	1,2	2,5	1,3	3,0*		8,6	
	0,0 m					2,8	6,3	3,0	7,1*	1,9	4,1	2,0	5,1*	1,4	3,0	1,5	4,0*	1,2	2,5	1,3	2,8*		8,4	
	-1,5 m	5,2	7,1*	5,5	7,1*	2,8	6,3	3,0	6,8*	1,8	4,0	2,0	5,0*	1,4	3,0	1,5	3,8*	1,3	2,8	1,4	3,4*		7,8	
-3,0 m	5,3	8,3*	5,6	8,3*	2,8	5,8*	3,0	5,8*	1,9	4,1	2,0	4,2*					1,6	3,4*	1,8	3,4*		6,8		
5,2 m monobloc boom 2,8 m dipper arm Quickfit Outriggers and dozer blade Counterweight 2600 kg	7,5 m									2,6	2,9*	2,7	2,9*					2,0	2,7*	2,2	2,7*		6,7	
	6,0 m									2,5	2,9*	2,7	2,9*	1,7	3,0*	1,8	3,0*	1,5	2,3*	1,6	2,3*		7,9	
	4,5 m					3,7	3,8*	3,8*	3,8*	2,4	3,4*	2,5	3,4*	1,6	3,1*	1,7	3,1*	1,2	2,2*	1,3	2,2*		8,6	
	3,0 m					3,3	5,2*	3,5	5,2*	2,2	4,0*	2,3	4,0*	1,5	3,1	1,6	3,4*	1,1	2,4	1,2	2,5*		8,9	
	1,5 m					2,9	6,5	3,1	6,6*	2,0	4,2	2,1	4,6*	1,4	3,0	1,5	3,7*	1,0	2,3	1,1	2,4*		9,0	
	0,0 m					2,7	6,3	2,9	7,1*	1,8	4,1	2,0	5,0*	1,3	2,9	1,5	3,9*	1,1	2,3*	1,2	2,3*		8,8	
	-1,5 m	5,1	6,8*	5,3	6,8*	2,7	6,2	2,9	6,9*	1,8	4,0	1,9	5,0*	1,3	2,9	1,4	3,8*	1,2	2,6	1,3	3,0*		8,2	
-3,0 m	5,2	8,9*	5,4	8,9*	2,7	6,1*	2,9	6,1*	1,8	4,0	2,0	4,5*					1,4	3,1	1,5	3,2*		7,3		
-4,5 m					2,9	4,2*	3,1	4,2*										2,2	3,1*	2,4	3,1*		5,5	

\* Limited by hydraulic lifting capacity .

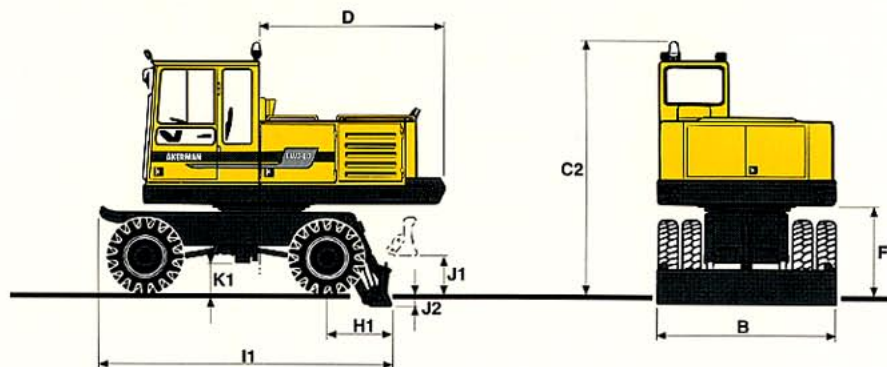
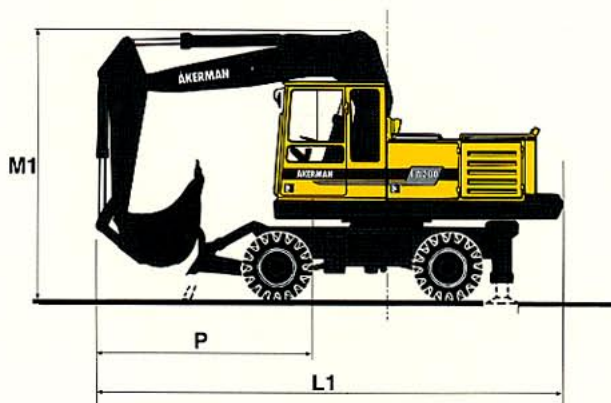
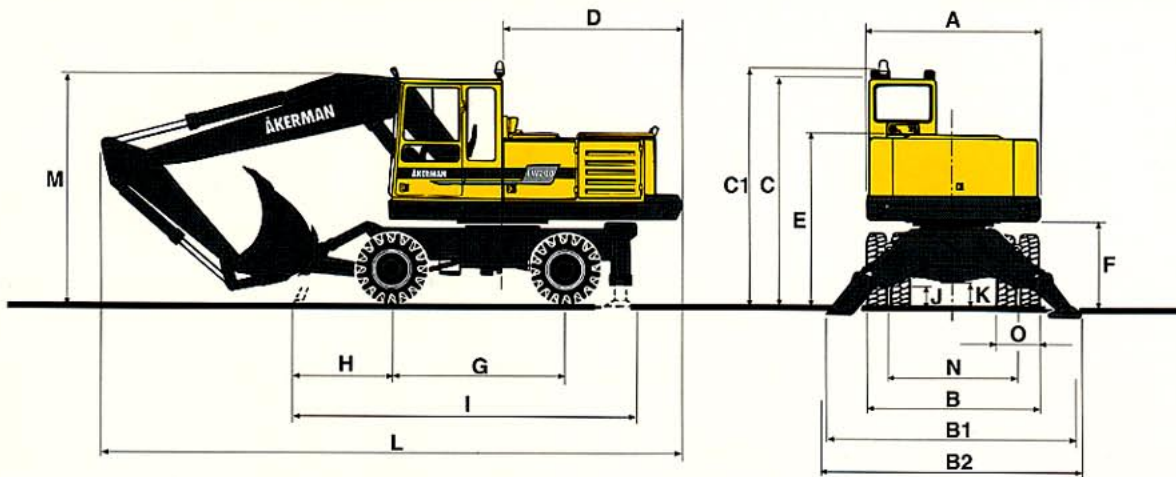
The above loads are in compliance with ISO standard 10567.

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 = 30 MPa (300 bar)



## DIMENSIONS



A:	mm	2490	J2:	mm	170
B:	mm	2500	K:	mm	360
B1:	mm	3690	K1:	mm	430
B2:	mm	3750	L:	mm	8300 (dipper arm 2,0 m and boom 4,65 m)
C:	mm	3220	L:	mm	8000 (dipper arm 2,8 m and boom 4,65 m)
C1:	mm	3360	L:	mm	8800 (dipper arm 2,8 m and boom 5,20 m)
C2:	mm	3490	L1:	mm	6860 (dipper arm 2,0 m)
D:	mm	2600	L1:	mm	6970 (dipper arm 2,4 m and 2,8 m)
E:	mm	2410	M:	mm	3500 (dipper arm 2,0 m and boom 4,65 m)
F:	mm	1180	M:	mm	3800 (dipper arm 2,8 m and boom 4,65 m)
G:	mm	2500	M:	mm	3700 (dipper arm 2,8 m and boom 5,20 m)
H:	mm	1240	M1:	mm	3990 (dipper arm 2,0 m and 2,4 m)
H1:	mm	980 (support blade rear)	M1:	mm	4300 (dipper arm 2,8 m)
I:	mm	4750	N:	mm	1910
I1:	mm	4010	O:	mm	590
J:	mm	330	P:	mm	3190 (dipper arm 2,0 m)
J1:	mm	530	P:	mm	3300 (dipper arm 2,4 m and 2,8 m)



## STANDARD EQUIPMENT

<p><b>Engine and Electrical System</b>          Computer controlled monitoring system          Battery disconnecter and main fuel tap          Automatic idling speed (Fuel-miser)          Air filter with 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</p> <p><b>Undercarriage</b>          Twin wheels 10.00 – 20 PR14          4-wheel drive          Dozer blade in front, and two outriggers rear          Oscillating front axle <math>\pm 7^\circ</math>          Axles with hub reduction          2-circuit travel brakes</p> <p><b>Superstructure</b>          Counterweight 2600 kg</p>	<p><b>Safety and Comfort</b>          Safety bar for control levers          Hose rupture valve on boom cylinder          Hydraulic refuelling pump, 90 l/min          Overload indicator          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,            4 exterior, 1 interior          Cab heating with 14 outlets          Ergonomically designed and adjustable operator's seat, with heating coils          Adjustable steering wheel          Filtered air intake          Cab skylight</p>	<p>Sliding window in the cab door          Emergency exit through rear window          Tinted windows (clear front)          Internal sun visor          Double intermittent windscreen wipers          Windscreen washers          Compressor horn          Radio console</p> <p><b>Hydraulics</b>          Float position on boom          Three variable axial piston working pumps          Mode selector, 3 steps          Power boost          Dual main valve for the travel and equipment functions          Standard filter cartridges for return, leak oil and respiration filter systems          Swing-out oil cooler          Hydraulic equipment for quickfit</p>	<p><b>Equipment</b>          4,65 m monobloc boom          2,4 m dipper arm          Hydraulic quickfit          End dampening on all cylinders          Security lifting hook          Friction welded piston rod eyes</p>
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## OPTIONAL EQUIPMENT *(Standard on certain markets)*

<p><b>Engine and Electrical System</b>          Electric over speed protector          Volvo dieseldriven engine and cab heater with digital timer          Immersion heater, 220 V          Precyclone with exhaust ejector</p> <p><b>Undercarriage</b>          Twin wheels            11.00 – 20 PR16            12.00 – 20 PR16          Single tyres          Solid tyres          Mud guards          Stone protection rings          Widening rings 2 x 50 mm          Oscillating outriggers plates          Support blade, rear          Tool box          Tow hook</p>	<p><b>Superstructure</b>          Counterweight            1750 kg            2200 kg</p> <p><b>Safety and Comfort</b>          Protective grid for front pane/roof pane          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</p>	<p><b>Hydraulics</b>          Biologically degradable oil          Hydraulic equipment for:            slope bucket            grab            hydraulic hammer            roto-tilt            jib            crusher            shears          Installation of a 4th working pump</p>	<p><b>Equipment</b>          5,2 m monobloc boom          5,1 m 2-piece boom          2,0 m and 2,8 m dipper arm          Extra headlights on the boom</p>
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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 Construction Equipment

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