

Åkerman EC200



- **Engine Power:**
107 kW (145 hp)
- **Operating Weight:**
18,1 - 19,8 t
- **Buckets:**
606 - 1130 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*
- *Long undercarriage for high stability*
- *High crawler speed – 5,2 km/h*

ÅKERMAN

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	r/s (r/min)	30 (1800)
ISO 3046 / DIN 6271*	kW (hp)	107 (145)
No. of cylinders		6
Displacement, total	l	5,48
Bore	mm	98,43
Stroke	mm	120

* Fan excluded

UNDERCARRIAGE



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

Track chain size		B4B
No. of track shoes		2 x 52
Track width	mm	750
alt.	mm	600, 900
No. of bottom rollers		2 x 9
Skid rail		2 x 1

ELECTRIC SYSTEM



Micro processor for monitoring of engine/hydraulic system. High capacity and well protected electric system. Most relays and fuses are centralized in the cab.

Battery disconnecter.

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

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.

Sound level: Approved according to 86/662/EEC.

Surroundings (ISO 6393)		
(10 m distance from the machine)		
Average value L_{WA} (acoustic power)	dB(A)	aprox. 104
Inside the cab (ISO 6394)		
with the door closed		
L_{pA} (acoustic pressure)	dB(A)	aprox. 73

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	kN	196
Max. travel speed	km/h	5,2
Gradeability, continuously	° (%)	55 (143)

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	s	5,0
180° turn	s	7,0

* Empty bucket and extended equipment.

SERVICE REFILL CAPACITIES



Fuel tank	l	290
Fuel pump capacity	l/min	90
Hydraulic system, total	l	320
Diesel engine	l	22
Cooling system (incl. glycol)	l	32
Travel gearbox	l	2 x 3,4
Slew gearbox	l	16,5

HYDRAULIC 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

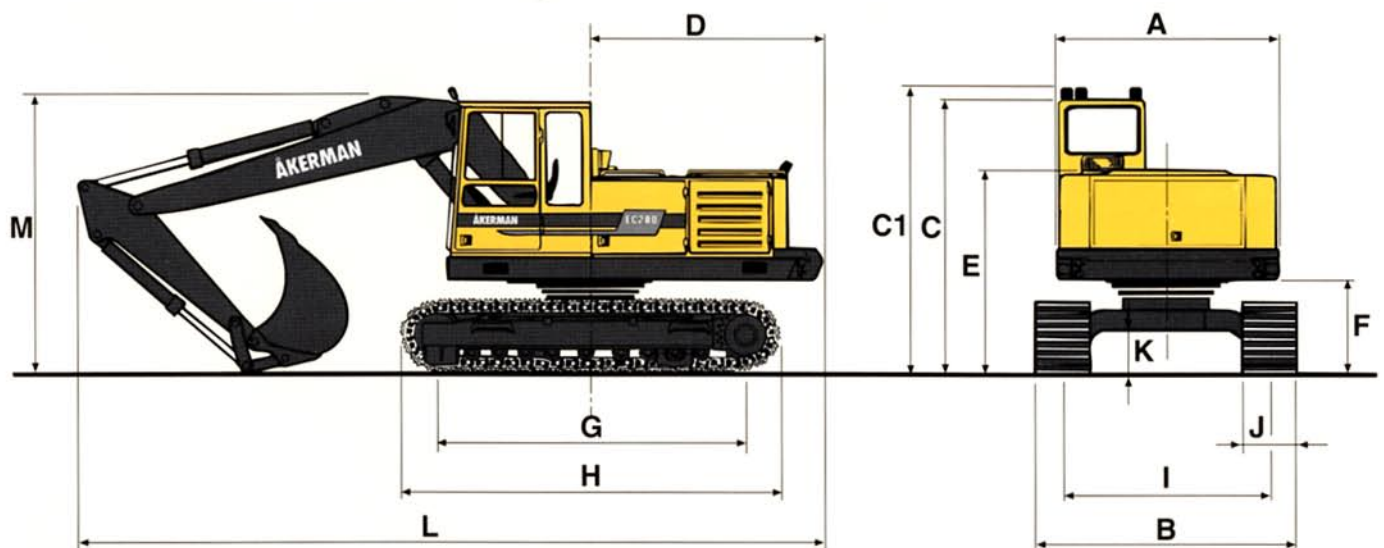
CAP = Capacity

Powerboost temporarily selectable in 10 sec. even 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.

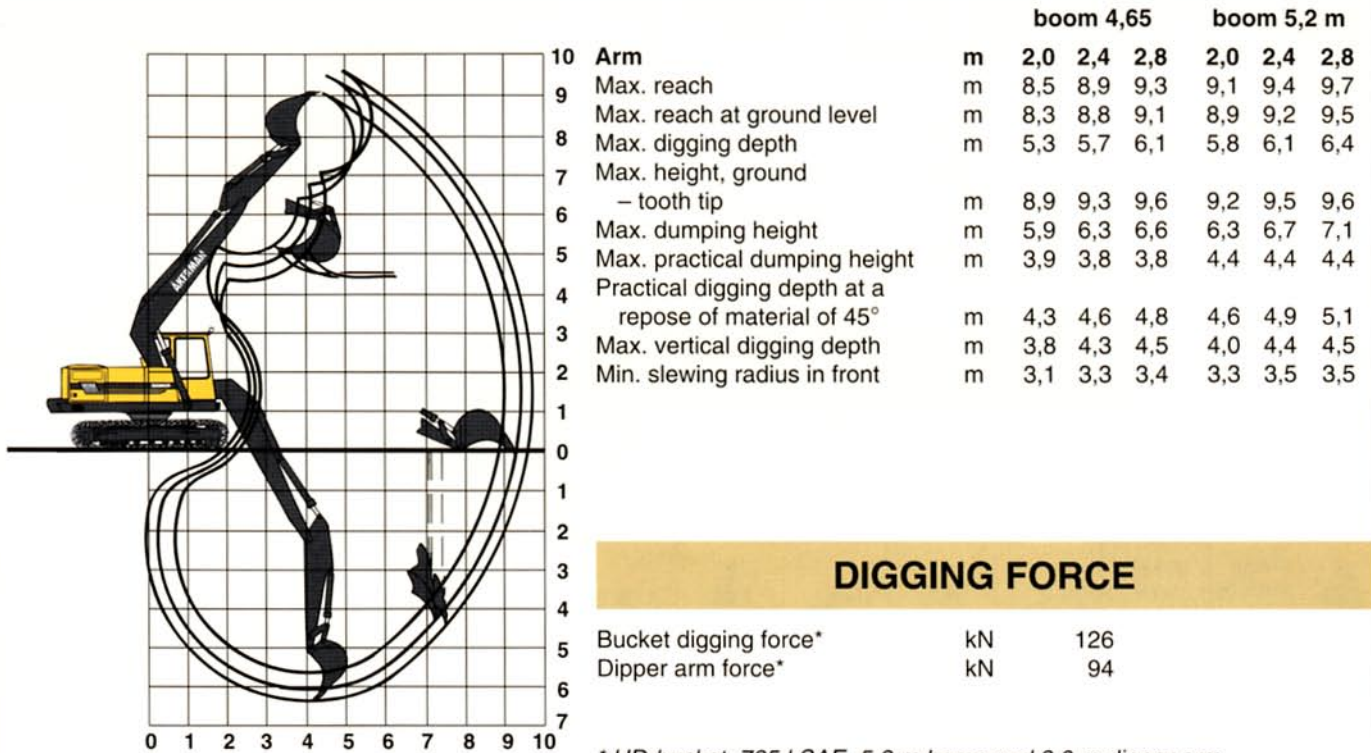
Pump P1		
Max. pressure	MPa	28
Max. flow	l/min	64
Pumps P2 and P3		
Max. pressure	MPa	26
Power boost	MPa	30
Max. flow	l/min	2 x 114
Servo pump		
Pressure	MPa	6,5
Flow	l/min	17

DIMENSIONS



A:	mm	2490	
B:	mm	2900/3050/3200	
C:	mm	2990	
C1:	mm	3130	
D:	mm	2600	
E:	mm	2200	
F:	mm	1010	
G:	mm	3460	
H:	mm	4240	
I:	mm	2300	
J:	mm	600/750/900	
K:	mm	470	
L:	mm	8900	(2,0 m arm and 5,2 m boom)
L:	mm	8900	(2,4 m arm and 5,2 m boom)
L:	mm	8800	(2,8 m arm and 5,2 m boom)
M:	mm	3100	(2,0 m arm and 5,2 m boom)
M:	mm	3200	(2,4 m arm and 5,2 m boom)
M:	mm	3300	(2,8 m arm and 5,2 m boom)

WORKING RANGES



DIGGING FORCE

Bucket digging force*	kN	126
Dipper arm force*	kN	94

* HD-bucket, 725 l SAE, 5,2 m boom and 2,0 m dipper arm.

BUCKET AND ARM COMBINATIONS

BUCKETS	Volume SAE l	Cutting width mm (ins)	Weight kg	Fitting *	Suitable for Counterweight 2 600 kg					
					boom 4,65 m and arm			boom 5,2 m and arm		
					2,0 m	2,4 m	2,8 m	2,0 m	2,4 m	2,8 m
Rock 2 t/m ³	900	1125 (44)	585	QF	•	•	•	•	•	•
Heavy duty 2 t/m ³	895	1200 (48)	750	QF	•	•	•	•	•	•
	895	1200 (48)	740	D	•	•	•	•	•	•
Bulk 1.5 t/m ³	1130	1500 (60)	810	QF	•	•	•	•	•	
G.P. Trench 1.6 t/m ³	306	500 (20)	400	QF	•	•	•	•	•	•
	395	600 (24)	440	QF	•	•	•	•	•	•
	606	750 (30)	520	QF	•	•	•	•	•	•
	768	900 (36)	580	QF	•	•	•	•	•	•
	1093	1200 (48)	690	QF	•	•	•	•	•	•
Ditch cleaning	970	1500 (60)	570	QF	•	•	•	•	•	•
	1175	1800 (72)	680	QF	•	•	•	•	•	•

* D = Direct fitting

QF = Quickfit

WEIGHT AND GROUND PRESSURE















Standard machine, 5,2 m boom, 2,8 m dipper arm, 900 l bucket and counterweight 2600 kg.

Track shoes	Operating weight	Ground pressure
600 mm	18 500 kg	40,5 kPa
750 mm	19 300 kg	33,8 kPa
900 mm	19 800 kg	28,9 kPa

LIFTING CAPACITIES

Max. load at dipper pin. Unit: 1000 kg.

 Across carriage  Along carriage	Lifting hook related to ground level	Reach from machine centre										
		3,0 m		4,5 m		6,0 m		7,5 m		Max. reach		Max. m
												
4,65 m boom 2,4 m arm 750 mm track shoes 2600 kg counterweight	6,0 m			4,09 *	4,09 *					3,70 *	3,70 *	5,9
	4,5 m			4,52 *	4,52 *	3,87	4,24 *			3,18	3,29 *	6,8
	3,0 m			5,61 *	5,61 *	3,75	4,61 *			2,86	3,86 *	7,2
	1,5 m			5,36	6,79 *	3,61	5,09 *			2,70	2,97 *	7,4
	0,0 m			5,17	7,38 *	3,50	5,37 *			2,77	3,00 *	7,2
	-1,5 m	9,60	10,2 *	5,12	7,15 *	3,48	5,12 *			3,10	4,11 *	6,6
-3,0 m	8,58 *	8,58 *	5,18	5,90 *					3,99	4,25 *	5,5	
5,2 m boom 2,4 m arm 750 mm track shoes 2600 kg counterweight	6,0 m					3,70 *	3,70 *			3,35	3,69 *	6,6
	4,5 m			4,33 *	4,33 *	3,84	3,85 *			2,76	3,47 *	7,4
	3,0 m			5,52	5,55 *	3,67	4,34 *	2,65	3,84 *	2,50	3,69 *	7,8
	1,5 m			5,17	6,70 *	3,50	4,86 *	2,58	4,01	2,40	3,72	7,9
	0,0 m			4,99	7,19 *	3,39	5,19 *	2,53	3,95	2,45	3,82	7,7
	-1,5 m	6,47 *	6,47 *	4,95	7,02 *	3,35	5,12 *			2,67	3,99 *	7,2
-3,0 m	8,73 *	8,73 *	5,00	6,17 *	3,40	4,34 *			3,28	4,05 *	6,2	
5,2 m boom 2,8 m arm 750 mm track shoes 2600 kg counterweight	6,0 m					3,34 *	3,34 *			3,06	3,35 *	7,0
	4,5 m			3,90 *	3,90 *	3,57 *	3,57 *	2,71	3,47 *	2,53	2,89 *	7,8
	3,0 m			5,12 *	5,12 *	3,68	4,08 *	2,65	3,62 *	2,30	2,87 *	8,2
	1,5 m			5,19	6,36 *	3,49	4,66 *	2,56	3,86 *	2,21	2,98 *	8,3
	0,0 m			4,96	7,04 *	3,35	5,06 *	2,49	3,97	2,25	3,36 *	8,1
	-1,5 m	6,34 *	6,34 *	4,88	7,06 *	3,29	5,12 *	2,47	3,86 *	2,44	3,77 *	7,6
-3,0 m	9,28	9,33 *	4,90	6,41 *	3,31	4,63 *			2,90	3,82 *	6,7	
-4,5 m	6,79 *	6,79 *	4,68 *	4,68 *					3,65 *	3,65 *	5,2	

* 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, level ground.

Working pressure with HLD = 30 MPa (300 bar)

STANDARD EQUIPMENT

Engine and Electrical System	Safety and Comfort	Hydraulics	Equipment
<p>Computer controlled monitoring system</p> <p>Battery disconnecter and main fuel tap</p> <p>Automatic idling speed (Fuel-miser)</p> <p>Air filter with indicator</p> <p>Hour meter</p> <p>Electric preheating element</p> <p>Revs counter</p> <p>Fuel meter</p> <p>Temperature meter for cooling fluid and hydraulic oil</p> <p>24 volt electrical system with 4 standard batteries</p> <p>Cranked exhaust pipe</p> <p>Undercarriage</p> <p>750 mm track shoes with mud holes</p> <p>Tripple grousers</p> <p>Hydraulic track adjuster</p> <p>Derailing shields, 2 pcs/side</p> <p>Skid rails</p> <p>Superstructure</p> <p>Counterweight 2600 kg</p>	<p>Safety bar for control levers</p> <p>Hose rupture valve on boom cylinder</p> <p>Hydraulic refuelling pump, 90 l/min</p> <p>Over load indicator</p> <p>Lights (halogen):</p> <p>5 working lights, front</p> <p>1 working light, rear</p> <p>Illuminated cab, engine compartment and fuel filling compartment</p> <p>Rear view mirrors:</p> <p>4 exterior, 1 interior</p> <p>Cab heating with 14 outlets</p> <p>Ergonomically designed and adjustable operator's seat, with heating coils</p> <p>Filtered air intake</p> <p>Cab skylight</p> <p>Sliding window in the cab door</p> <p>Emergency exit through rear window</p> <p>Tinted windows (clear front)</p> <p>Internal sun visor</p> <p>Double intermittent windscreen wipers</p> <p>Windscreen washers</p> <p>Compressor horn</p> <p>Radio cassette</p>	<p>Float position on boom</p> <p>Three variable axial piston working pumps</p> <p>Mode selector, 3 steps</p> <p>Power boost</p> <p>Dual main valve for the travel and equipment functions</p> <p>Standard filter cartridges for return, leak oil and respiration filter systems</p> <p>Swing-out oil cooler</p> <p>Hydraulic equipment for quickfit</p>	<p>5,2 m monobloc boom</p> <p>2,8 m dipper arm</p> <p>Hydraulic quickfit</p> <p>End dampening on all cylinders</p> <p>Security lifting hook</p> <p>Friction welded piston rod eyes</p>

OPTIONAL EQUIPMENT *(Standard on certain markets)*

Engine and Electrical System	Safety and Comfort	Hydraulics	Equipment
<p>Electric over speed protector</p> <p>Volvo diesel driven engine and cab heater with digital timer</p> <p>Immersion heater, 220 V</p> <p>Precyclone with exhaust ejector</p> <p>Undercarriage</p> <p>600/900 mm track shoes</p> <p>Top rollers</p> <p>Superstructure</p> <p>Counterweight</p> <p>1750 kg</p> <p>2200 kg</p>	<p>Protective grid for front pane/roof pane</p> <p>Fire extinguisher</p> <p>Seat belts</p> <p>Rotating beacon</p> <p>Protection against overfilling fuel</p> <p>Extra circulation pump for the heating system</p> <p>Extra hose rupture valves</p> <p>Rear lights</p> <p>Exterior glare shields</p> <p>Rear window jalousie</p> <p>Air conditioning</p> <p>Micro filter for the cab</p>	<p>Biologically degradable oil</p> <p>Hydraulic equipment for:</p> <p>slope bucket</p> <p>grab</p> <p>hydraulic hammer</p> <p>jib</p> <p>crusher</p> <p>shears</p> <p>magnet</p> <p>2-piece boom</p> <p>Installation of a 4th working pump</p>	<p>5,1 m 2-piece boom</p> <p>4,65 m monobloc boom</p> <p>2,0 m and 2,4 m dipper arm</p> <p>Extra headlights on the boom</p>

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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