



# Åkerman EC620ME



- **Engine Power:**  
284 kW (386 hp)
- **Operating Weight:**  
61,5 t
- **Buckets:**  
3 500 – 4 100 l
- *Direct injection, turbocharged Volvo diesel engine with intercooler*
- *Åkerman three-circuit hydraulic system*
  - *Comfort cab*
    - *computerized control and warning system*
    - *ergonomic environment*
    - *low sound level*
    - *filtered air*
- *Heavy duty digging equipment with spherical bearings*
- *Digging and breakout forces for tough conditions*
- *Long undercarriage for high stability*
- *Power and speed for digging and loading*
- *Slew ring in oil bath*
- *Automatic lubrication*

**ÅKERMAN**

## ENGINE



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

Make		Volvo
Model		TD 121 KG
Net output at	r/s (r/min)	30 (1 800)
ISO 3046 / DIN 6271*	kW (hp)	284 (386)
No. of cylinders		6
Displacement, total	l	11,98
Bore	mm	130,17
Stroke	mm	150

\* Excl. fan

## UNDERCARRIAGE



Heavy duty box-designed body with solid slew ring support. Front idler and rollers are lubricated for life.

Track chain size	B8
No. of track shoes	2 x 53
Track width	mm 800
alt.	mm 600
No. of bottom rollers	2 x 10
No. of top rollers	2 x 2

## 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 of optional equipment. Battery disconnecter standard.

Voltage	V	24
Battery	V	2 x 12
Battery capacity	Ah	170
A.C. Generator	V/A	28/45
Alternator rating	W	1 260

## 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 side 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 headrest and individually adjustable armrests and hand controls.

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

## DRIVE TRAIN



Each track is powered by an axial piston hydraulic motor. The track brakes are of multidisc type and are spring applied and hydraulically released.

Max. tractive force	kN	553
Max. travel speed	km/h	2,3
Gradeability, continuously	° (%)	38,5 (79,6)

## SERVICE REFILL CAPACITIES



Fuel tank	l	770
Fuel pump capacity	l/min	90
Hydraulic system, total	l	840
Diesel engine	l	38
Cooling system (incl. glycol)	l	60
Slew ring	l	25

## 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. The entire slew ring runs in a dust protected oil bath.

Slew, start to stop*		
90° turn	s	7,2
180° turn	s	10,2

\* Empty bucket and equipment extended

## HYDRAULIC SYSTEM



**Åkerman 3-circuit hydraulic system all-servo controlled.**

**Pumps:** P1 is a power and pressure controlled pump with priority to slew circuit - the other 4 pumps to boom, dipper arm, bucket and transport. Pumps P2V and P3V are power and pressure controlled. P2K and P3K have a constant flow.

**Mode selector:** Two working modes:

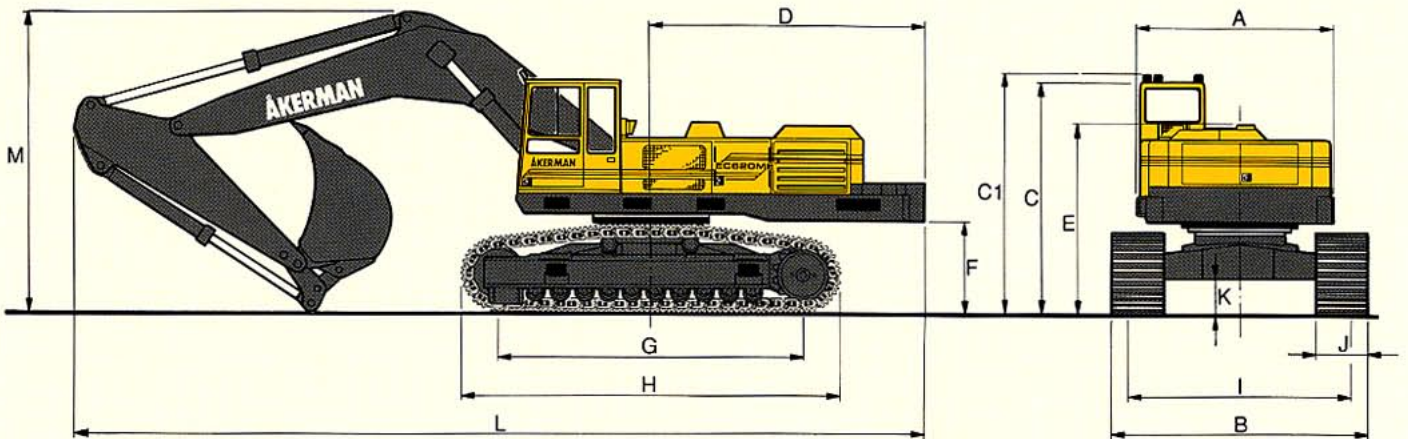
**ECO** = Economy

**CAP** = Capacity

**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 movement equipped with floating position to increase the digging speed. Security hose rupture valve on the boom cylinders.

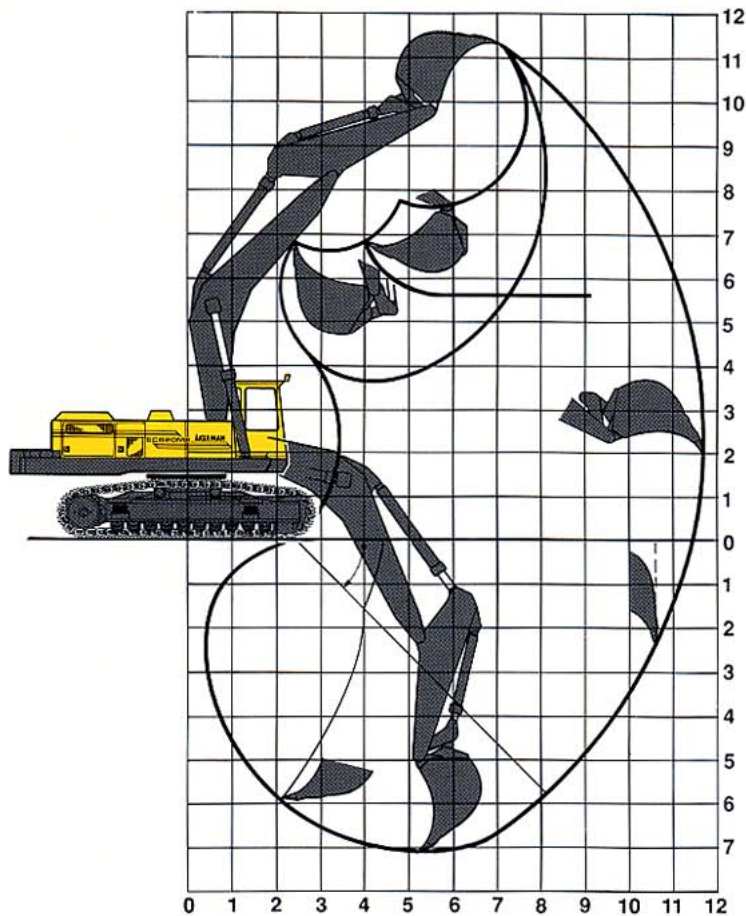
Pump P1			
Max. pressure	MPa		29
Max. flow	l/min		180
Pumps P2V and P3V			
Max. pressure	MPa		30
Max. flow	l/min		2 x 173
Pump P2K and P3K			
Max. pressure	MPa		30
Max. flow	l/min		2 x 180
Servo pump			
Pressure	MPa		6,5
Flow	l/min		27
Fan pump			
Pressure	MPa		15
Flow	l/min		30

## DIMENSIONS



A:	mm	3 030	H:	mm	5 780
B:	mm	3 960	I:	mm	3 400
C:	mm	3 560	J:	mm	800
C1:	mm	3 700	K:	mm	550
D:	mm	4 220	L:	mm	12 890
E:	mm	2 910	M:	mm	4 640
F:	mm	1 420	M:	mm	4 380 (disassembled link shaft)
G:	mm	4 630			

## WORKING RANGES



Boom	m	6,6
Stick	m	2,75
Max reach	m	11,7
Max. reach at ground level	m	11,5
Max. digging depth	m	7,2
Max. height, ground – tooth tip	m	11,5
Max. dumping height	m	7,8
Max. practical dumping height	m	5,5
Practical digging depth at a repose of material of 45°	m	5,9
Max. vertical digging depth	m	3,3
Min. stick radius in front	m	4,7

### DIGGING FORCE

Bucket digging force*	kN	352
Stick force*	kN	278

\* HD-bucket, 4 100 l SAE, and 2,75 m stick.

### BUCKET COMBINATIONS

BUCKETS	Volume SAE l	Cutting width mm	Weight kg	Fitting *	Suitable for stick	
					2,75 m	
Heavy Duty 1,8 t/m <sup>3</sup>	4 100 3 500	2 040 1 840	3 550 3 250	Std. Std.	• •	

\* Std. = Direct fitting

## WEIGHT AND GROUND PRESSURE



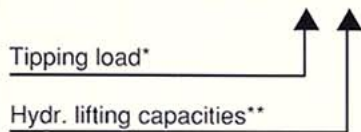
Standard machine, 6,6 m boom, 2,75 m stick,  
4 100 l bucket and counterweight  
10 600 kg.

Track shoes	Machine weight	Ground pressure
800 mm	61 500 kg	74,9 kPa

## STABILITY AND LIFTING CAPACITIES

In the bucket lifting hook. Unit: 1 000 kg.

			Reach from machine center								Max. reach								
			6,0 m		7,5 m		9,0 m		10,5 m		Max. reach		Max. m						
6,6 m boom 2,75 m stick 4 100 l bucket Bucket weight: 3 550 kg	Lifting hook related to ground level	9,0 m			19,0	9,46	28,3	9,46					14,8	8,63	22,2	8,63	8,5		
		7,5 m			18,6	9,61	27,6	9,61	13,1	9,03	19,6	9,03		11,1	8,13	16,9	8,13	9,7	
		6,0 m	25,1	12,5	38,6	12,5	17,6	10,6	26,4	10,6	12,6	9,44	19,0	9,44	9,14	8,09	14,2	8,09	10,5
		4,5 m			16,2	11,8	24,8	11,8	11,9	10,1	18,3	10,1	8,83	8,53	13,8	8,53	7,99	7,98	11,0
		3,0 m			15,1	13,0	23,6	13,0	11,2	10,7	17,5	10,7	8,44	8,44	13,4	9,00	7,28	7,28	11,3
		1,5 m			14,4	13,9	22,8	13,9	10,7	10,7	16,9	11,1	8,11	8,11	13,0	8,96	7,08	7,08	11,3
		0,0 m			14,0	14,0	22,3	14,3	10,3	10,3	16,5	11,1	7,94	7,94	12,9	8,80	7,32	7,32	11,0
		-1,5 m	20,2	18,2	32,9	18,2	13,9	13,7	22,2	13,7	10,3	10,3	16,6	10,6			8,08	8,06	10,4
		-3,0 m	20,5	15,8	33,2	15,8	14,1	11,8	22,4	11,8	10,5	8,86	16,7	8,86			9,47	7,37	9,6
	-4,5 m	21,1	11,1	33,8	11,1	14,7	7,88	23,1	7,88							12,8	6,13	8,2	



\* Regardless of the hydraulic lifting capacity of the machine.  
\*\* Regardless of the stability of the machine.

N.B. Max permitted load in the lifting hook is 14 t.

## STANDARD EQUIPMENT

### Engine and electrical system

Computer controlled monitoring system  
 Battery disconnect and main fuel tap  
 Air filter with indicator  
 Hour meter  
 Electric starter element  
 Revs counter  
 Fuel meter  
 Temperature meter for cooling fluid and hydraulic oil  
 24 volt electrical system

### Undercarriage

Slew ring in oil bath  
 Top rollers, 2 pcs  
 Tripple grousers  
 800 mm track shoes  
 Hydraulic track adjuster  
 Derailing shields, 1 pcs

### Superstructure

Counterweight 10 600 kg

### Safety and Comfort

Cab heating with 14 outlets  
 Filtered air intake  
 Cab skylight  
 Openable side pane  
 Emergency exit through rear window  
 Ergonomically designed and adjustable operator's seat  
 Rear view mirrors,  
 2 exterior  
 1 interior  
 Lights:  
 5 working lights, front, halogen  
 1 working light, rear, halogen  
 Instrument lighting  
 Illuminated cab, engine compartment and fuel filling compartment  
 Safety bar for control levers  
 Double intermittent windscreen wipers  
 Hose rupture valve on boom cylinders  
 Hydraulic refuelling pump, 90 l/min  
 Air horn

### Hydraulics

Three variable and two fixed axial piston working pumps  
 Mode selector  
 Standard filter cartridges for return, leak oil and breathing filter  
 Dual main valve for the travel and equipment functions  
 Float position on boom

### Equipment

6,6 m monobloc boom  
 2,75 m stick  
 End dampening on all cylinders  
 Spherical link bearings in all connections  
 Security lifting hook  
 Friction welded piston rod eyes  
 Automatic lubrication

## OPTIONAL EQUIPMENT *(Standard on certain markets)*

### Engine and Electrical System

Electric over speed protector  
 Digital timer  
 Combined cab/engine heater Primus 2460  
 Engine heater Primus 2400/2440  
 Immersion heater, 220 V  
 Precyclone with exhaust ejector  
 Cranked exhaust pipe

### Undercarriage

600/700/900 mm track shoes  
 Track motor protection

### Safety and Comfort

Tinted windows  
 Interior and exterior glare shields  
 Protective grid for front pane/roof pane  
 Fire extinguisher  
 Operator's seat with air cushion suspension  
 Seat belts  
 Rotating beacon  
 Rear window jalousie  
 Air conditioning  
 Fine filter for the cab  
 Micro filter for the cab  
 Extra circulation pump for the heating system  
 Radio cassette  
 Windscreen washers  
 Extra hose rupture valve on dipper arm/bucket cylinders  
 Cab elevation  
 600/1200/1830 mm  
 Catwalk  
 Spark guard on dipper cylinder  
 Tropical cab roof

### Hydraulics

Biologically degradable oil

### Equipment

Extra headlights on the boom

### Frontshovel equipment with 3500 l visor bucket

### Material handling equipment

10,3 m boom  
 8,1 m dipper arm

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.

## VME Excavators AB

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