



Åkerman EC620/EC620ME



- **Engine Power:**
284 kW (386 hp)
 - **Operating weight:**
60,5 – 62,0 t
 - **Buckets:**
2 600 – 3 060 l BE *
3 500 – 4 100 l ME *
 - 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 equipment with spherical bearings
 - Digging and breakout forces for tough conditions
 - Long undercarriage for high stability
 - Slew ring in oil bath
 - Automatic lubrication
- * BE = Backhoe Equipment
ME = Mass Excavation Equipment

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

* Fan excluded

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 disconnect 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 heating, 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.

		BE	ME
Max. tractive force	kN	480	553
Max. travel speed	km/h	2,3	2,3
Gradeability, continuously	°	33,3	38,5
	(%)	(66)	(79,6)

Surroundings (ISO 6393)		
L_{WA} (acoustic power)		dB(A) 110
Inside the cab (ISO 6394)		
with the door closed		
L_{pA} (acoustic pressure)		dB(A) 78

SERVICE REFILL CAPACITIES



Fuel tank	l	770
Fuel refilling 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	Sek.	7,2
180° turn	Sek.	10,2

* Empty bucket and backhoe equipment extended

HYDRAULIC SYSTEM



Åkerman 3-circuit hydraulic system.

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

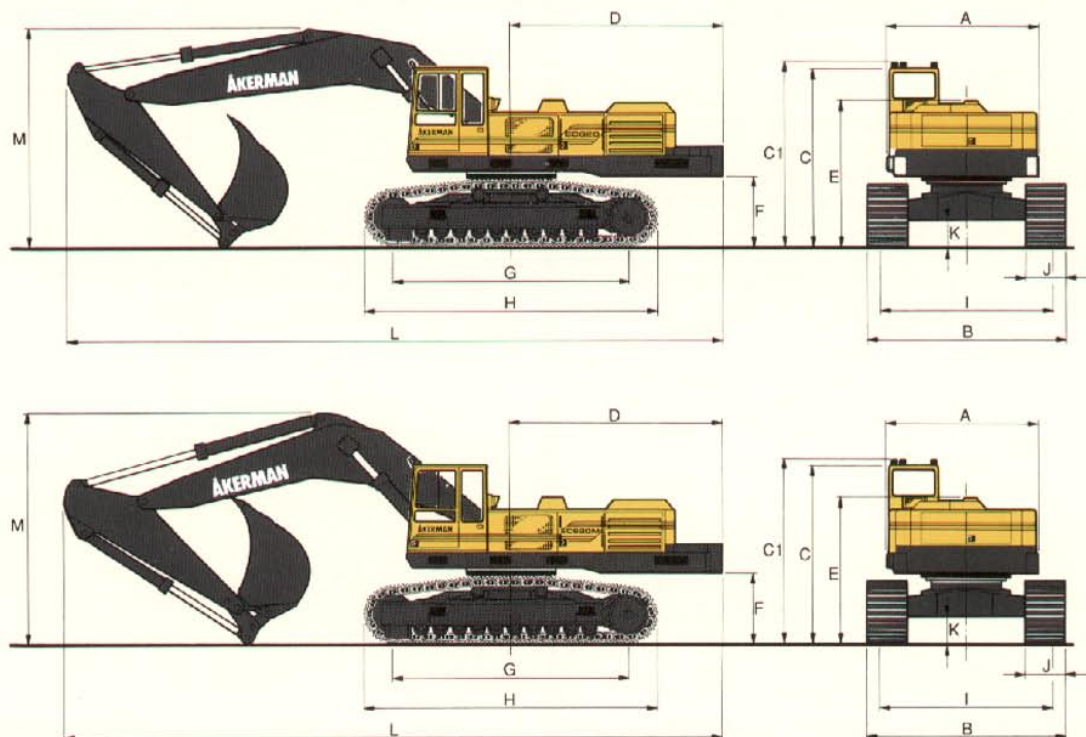
Valve system: Boom, arm and bucket are operated by dual main valves to obtain best combination of precision manoeuvrability and minimized fuel consumption. Boom cylinder movement equipped with floating position to increase the digging speed. Security hose rupture valve on the boom cylinders.

Pump P1			
Max. pressure	MPa		28
Max. flow	l/min		180
Pumps P2V and P3V			
Max. pressure	MPa		26 (BE)*
Max. pressure	MPa		30 (ME)*
Max. flow	l/min		2 x 173
Pumps P2K and P3K			
Pressure	MPa		26 (BE)*
Pressure	MPa		30 (ME)*
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

* BE = Backhoe Equipment

ME = Mass Excavation Equipment

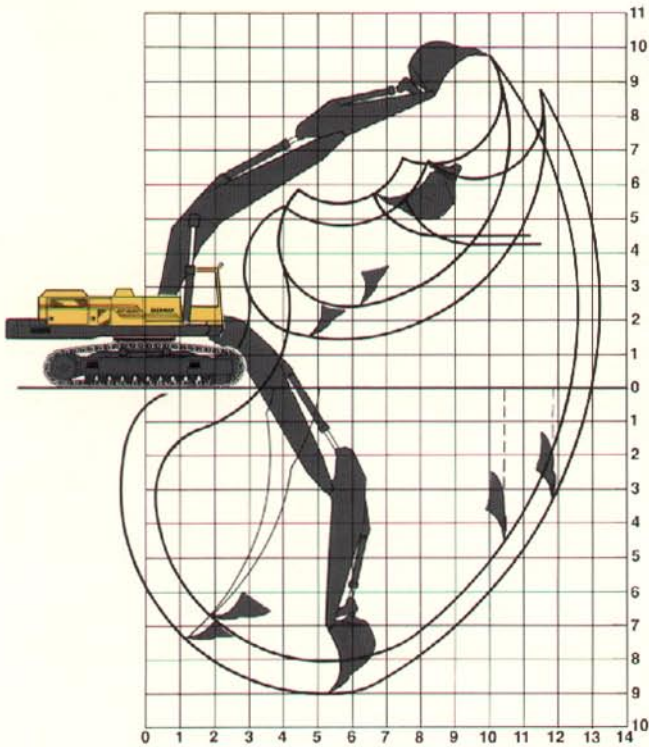
DIMENSIONS



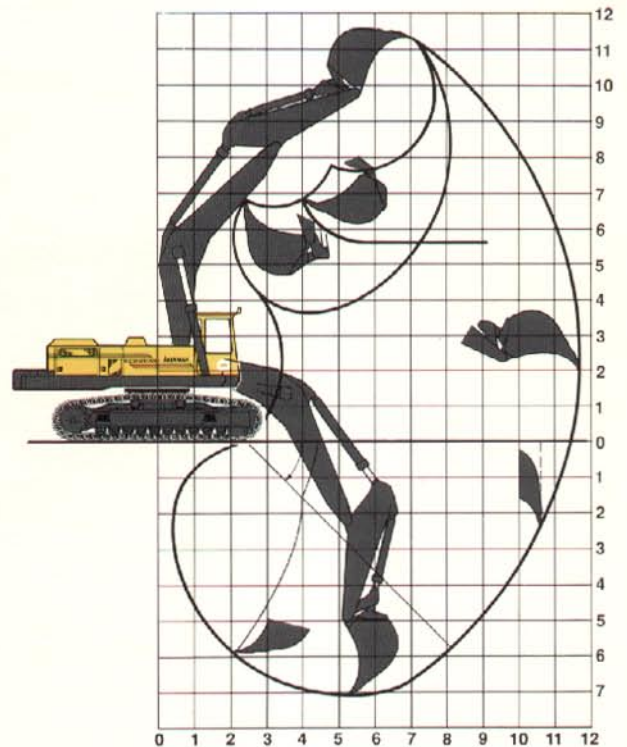
A:	mm	3 030	G:	mm	4 630	L:	mm	12 890	(ME-equipment)	
B:	mm	3 960	H:	mm	5 780	M:	mm	4 440	(3,0 m arm)	
C:	mm	3 560	I:	mm	3 400	M:	mm	4 530	(4,0 m arm)	
C1:	mm	3 700	J:	mm	800	M:	mm	4 220	(3,0 m arm, without bucket)	
D:	mm	4 220	K:	mm	550	M:	mm	4 360	(4,0 m arm, without bucket)	
E:	mm	2 910	L:	mm	13 240	(3,0 m arm)	M:	mm	4 640	(ME-equipment)
F:	mm	1 420	L:	mm	13 300	(4,0 m arm)	M:	mm	4 380	(ME-equipment, without bucket)

WORKING RANGES

Backhoe Equipment



Mass Excavation Equipment



		BE	BE	ME
Boom	m	7,3	7,3	6,6
Arm	m	3,0	4,0	2,75
Max reach	m	12,9	13,4	11,7
Max. reach at ground level	m	12,7	13,2	11,5
Max. digging depth	m	8,3	9,1	7,2
Max. height, ground – tooth tip	m	10,0	8,8	11,5
Max. dumping height	m	6,6	6,2	7,8
Max. practical dumping height	m	4,4	4,4	5,5
Practical digging depth at a repose of material of 45°	m	6,7	7,0	5,9
Max. vertical digging depth	m	4,8	3,4	3,3
Min. slewing radius in front	m	6,9	6,9	4,7

BUCKET AND ARM COMBINATIONS

BUCKETS for direct fitting	Volume SAE l	Cutting width mm	Weight kg	Suitable for arm		
				BE 3,0 m	BE 4,0 m	ME 2,75 m
Heavy Duty 2,0 t/m ³	2 600	1 620	2 690	•	•	
	3 100	1 620	2 860	•		
Heavy Duty 1,8 t/m ³	3 500	1 840	3 250			•
	4 100	2 040	3 550			•

DIGGING FORCE

Bucket digging force	kN	295	BE
Dipper arm force	kN	205	BE
Bucket digging force	kN	352	ME
Dipper arm force	kN	278	ME

WEIGHT AND GROUND PRESSURE















Standard BE-machine, 7,3 m boom, 3,0 m arm,
3 100 l bucket and counterweight 10 600 kg.

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

Track shoes	Machine weight	Ground pressure
600 mm	59 000 kg	95,8 kPa
800 mm	60 500 kg BE	73,7 kPa
800 mm	61 500 kg ME	73,2 kPa

STABILITY AND LIFTING CAPACITIES

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

 Across carriage  Along carriage	Lifting hook related to ground level	Reach from machine center																				
		6,0 m		7,5 m		9,0 m		10,5 m		Max. Reach		Max. m										
																						
BE 7,3 m boom 3,0 m arm Bucket 3060 l, 2860 kg	7,5 m							9,70	5,77	14,8	5,77											
	6,0 m					12,5	6,81	18,9	6,81	9,49	6,17	14,5	6,17	7,89	5,59	12,3	5,59	11,4				
	4,5 m			16,3	8,98	24,9	8,98	12,1	7,46	18,4	7,46	9,12	6,49	14,1	6,49	7,03	5,49	11,2	5,49	11,9		
	3,0 m			15,4	10,2	23,8	10,2	11,4	8,06	17,7	8,06	8,74	6,81	13,7	6,81	6,61	5,54	10,6	5,54	12,1		
	1,5 m			14,7	11,2	23,1	11,2	10,9	8,57	17,2	8,57	8,41	7,02	13,3	7,02	6,46	5,60	10,5	5,60	12,1		
	0,0 m	20,5	15,7	33,2	15,7	14,3	11,6	22,7	11,6	10,6	8,85	16,8	8,85	8,21	7,01	13,1	7,01	6,69	5,72	10,8	5,72	11,8
	-1,5 m	20,7	15,2	33,6	15,2	14,2	11,3	22,6	11,3	10,5	8,71	16,7	8,71	8,26	6,78	13,2	6,78	7,15	5,58	11,5	5,58	11,4
	-3,0 m	20,9	13,8	33,7	13,8	14,4	10,4	22,7	10,4	10,7	7,92	16,9	7,92	8,37	5,69	13,3	5,69	8,23	5,47	13,1	5,47	10,6
-4,5 m	21,3	11,3	34,2	11,3	14,7	8,29	23,1	8,29	11,1	5,93	17,3	5,93					10,2	4,77	16,0	4,77	9,5	
-6,0 m	22,1	6,18	35,0	6,18													15,9	4,00	24,6	4,00	7,4	
BE 7,3 m boom 4,0 m arm Bucket 2600 l, 2690 kg	7,5 m									9,76	5,09	14,8	5,09									
	6,0 m									9,60	5,34	14,6	5,34									
	4,5 m					12,2	6,58	18,5	6,58	9,37	5,75	14,4	5,75	6,32	3,92	10,1	3,92	12,6				
	3,0 m	22,4	12,6	35,4	12,6	15,8	9,08	24,4	9,08	11,7	7,29	18,0	7,29	8,91	6,18	13,9	6,18	5,91	4,04	9,64	4,04	12,8
	1,5 m	21,0	14,7	33,8	14,7	14,9	10,4	23,3	10,4	11,1	7,96	17,3	7,96	8,49	6,56	13,4	6,56	5,74	4,18	9,45	4,18	12,8
	0,0 m	20,4	15,5	33,1	15,5	14,3	11,2	22,6	11,2	10,6	8,47	16,8	8,47	8,17	6,77	13,1	6,77	5,90	5,10	9,72	5,10	12,5
	-1,5 m	20,2	15,3	32,9	15,3	14,0	11,3	22,3	11,3	10,4	8,66	16,6	8,66	7,99	6,80	12,9	6,80	6,22	5,23	10,2	5,23	12,1
	-3,0 m	20,3	14,5	33,0	14,5	14,0	10,9	22,3	10,9	10,3	8,34	16,5	8,34	8,05	6,44	12,9	6,44	6,98	5,34	11,3	5,34	11,4
-4,5 m	20,6	12,9	33,3	12,9	14,2	9,61	22,6	9,61	10,6	7,28	16,8	7,28					8,37	5,26	13,3	5,26	10,4	
-6,0 m	21,2	9,69	34,0	9,69	14,7	6,98	23,1	6,98									11,3	4,81	17,6	4,81	8,9	
ME 6,6 m boom 2,75 m arm Bucket 4100 l, 3550 kg	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	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	12,7	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	11,8	8,01	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	11,5	8,02	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	11,9	8,06	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	13,1	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	15,1	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	20,0	6,13	8,2

Tipping load*

Hydr. lifting capacities**

* Regardless of the hydraulic lifting capacity of the machine.

** Regardless of the stability of the machine.

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

STANDARD EQUIPMENT

Engine and electrical system

Computer controlled monitoring system
 Battery disconnecter 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
 Cranked exhaust pipe

Undercarriage

Slew ring in oil bath
 Top rollers, 2 pcs
 Triple bar grousers
 800 mm track shoes
 Hydraulic track adjuster
 Derailing shields, 2 x 3 pcs

Superstructure

Counterweight 10 600 kg

Safety and Comfort

Cab heating with 14 outlets
 Filtered air intake
 Tinted windows (clear front)
 Cab skylight
 Openable side pane
 Emergency exit through rear window
 Ergonomically designed and adjustable operator's seat, with heating coils
 Internal sunvisor
 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
 Windscreen washers
 Hose rupture valve on boom cylinders
 Hydraulic refuelling pump, 90 l/min
 Compressor horn
 Over load indicator

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 equipment functions
 Float position on boom

Backhoe Equipment

7,3 m monobloc boom
 3,0 m dipper arm
 End dampening on all cylinders
 Spherical link bearings in all connections
 Security lifting hook
 Friction welded piston rod eyes
 Automatic lubrication

OR

Mass Excavation Equipment

6,6 m monobloc boom
 2,75 m dipper arm
 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
 Rear lights
 Extra headlights on the boom
 Volvo diesel driven engine and cab heater with digital timer
 Immersion heater, 220 V
 Precyclone with exhaust ejector

Undercarriage

600 mm track shoes
 Track motor protection

Safety and Comfort

Protective grid for front pane/roof pane
 Protection over drivers cab
 Catwalk
 Seat belts
 Fire extinguisher
 Rotating beacon
 Exterior glare shields
 Rear window jalousie
 Air conditioning
 Micro filter for the cab
 Extra circulation pump for the heating system
 Radio cassette player
 Extra hose rupture valve on dipper arm/bucket cylinders
 Spark guard on dipper cylinder
 Protection against overfilling fuel

Hydraulics

Biologically degradable oil

Backhoe Equipment

4,0 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.

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