



# Åkerman EC650

## NOVELTY

- *Volvo Low Emission Engine: 12 l*  
*Engine Output: 284 kW (386 hp)*
- *Machine Weight: 65–65,6 t*
- *Buckets for Backhoe equipment*
  - *General purpose (1,8 t/m<sup>3</sup>) 3 500 l*
  - *Light duty (1,5 t/m<sup>3</sup>) 4 100 l*
- *Buckets for Mass Excavator equipment*
  - *General purpose (1,8 t/m<sup>3</sup>) 4 500 l*
  - *Light duty (1,5 t/m<sup>3</sup>) 5 300 l*



**ÅKERMAN**



An Åkerman is built for the toughest jobs. It is dependable and powerful through and through, with structures of highstrength steel, sized so that the strength of the material is exploited without unnecessary dead weight.

Åkerman-made three-circuit hydraulics – one circuit for each digging movement – and the market's biggest engines provide high capacity and low fuel consumption. The fluid-cooled, turbocharged diesel engine works smoothly and reliably at moderate speed, resulting in a lower service requirement and longer service life.

Åkerman excavators are equipped to work just as well in all kinds of climates and ground conditions. From soft soil to hard rock.

## ENGINE

The EC650 is powered by a Volvo 12 litre turbo inter-cooler low emission engine. Output is 284 kW as per SAE J1349 gross and 274 kW as per SAE J1349 net/ ISO 9249 at 1800 r/min. Emissions are below the stringent standards which will apply in Europe from 1997.

Great emphasis has been placed on the filtration system. A three-step air filter with precyclone and safety filter has been introduced, as well as a water separating filter in the fuel line. Automatic idling (= Fuel miser), and control of engine oil level and air filter function, via the instrument panel is standard.

## HYDRAULIC SYSTEM

Five axial piston pumps feed the machine's three-circuit hydraulic system, which is of well-known Åkerman type.

**Three working modes** can be selected:

**HLD** (or Power Boost) raises working pressure from 30 to 34 MPa, providing extremely good digging and lifting forces.

In **CAP**, the flow from four of the pumps is used in order to increase the speed of the digging equipment, while the fifth pump always prioritizes swing movement.

For more precise movement, and when speed is not the highest priority, there is **ECO** mode, where each movement receives flow from two pumps.

The hydraulic oil cooler is of partial flow type, which is an advantage if, for example, the machine is working with a hydraulic hammer and return oil is going directly to the tank without being cooled.

The hydraulic oil filter is capable of maintaining a high degree of filtration, and due to its large filtration surface, only requires changing every 2000 operating hours.

## COUNTERWEIGHT

A full-height counterweight of 12 tonnes covers the entire rear of the machine. The engine silencer is built into the counterweight. The generously sized undercarriage and the large counterweight provide the machine with excellent stability.

## UNDERCARRIAGE

The undercarriage is built with an X-shaped mid-section for even distribution of forces. The swing ring is lubricated in an oil bath and is well protected against contamination. A chain size of D9G guarantees long service life.

Three derailing shields on each side are standard. Track motors, brakes and planetary gears are built into the crawler frame.

Traction is as much as 519 kN and travelling speed is 2,8 km/h.

## DIGGING EQUIPMENT

There are two robust digging equipments to choose between: Backhoe Equipment (BE) and Massexcavator Equipment (ME).

Working ranges	BE	ME
Reach, m	13,3	11,7
Digging depth, m	8,4	7,2
Digging force	BE	ME
Break out force, kN	355	399
Tear out force, kN	255	315

Both equipments have the same powerful hydraulic cylinders with double piston rod seals and 850 Brinell piston rods.

Float position on boom movement makes rock cleaning easier and increases digging capacity.

Automatic lubrication of the sealed spherical steel link bearings of the digging equipment means that there is no play in the bearing for several thousand hours of operation.

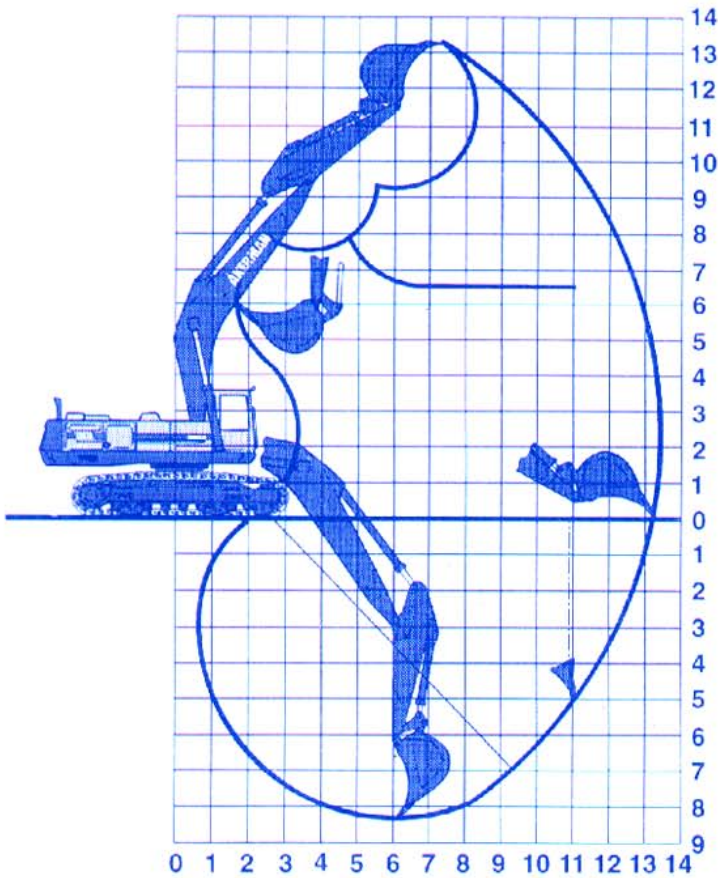
## COMFORT CAB – Now even better

It is no exaggeration to claim that Åkerman have large, comfortable cabs. Now, we have made life even easier with the EC650. Daily checking of engine oil and coolant is done from the cab, and the engine's start/stop feature is electrical. Windscreen washers, tinted windows and external rain/sun visors are now standard.



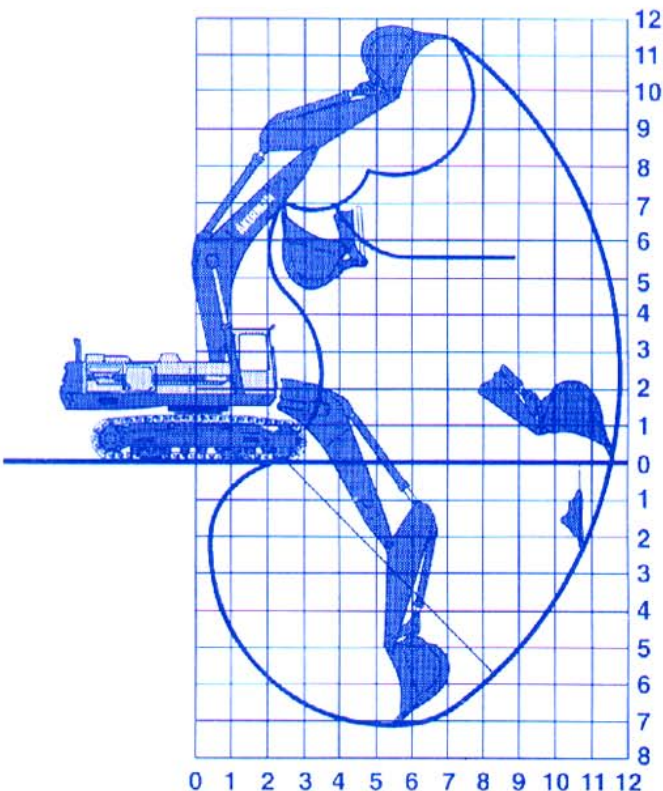
# WORKING RANGES

## BACKHOE EQUIPMENT



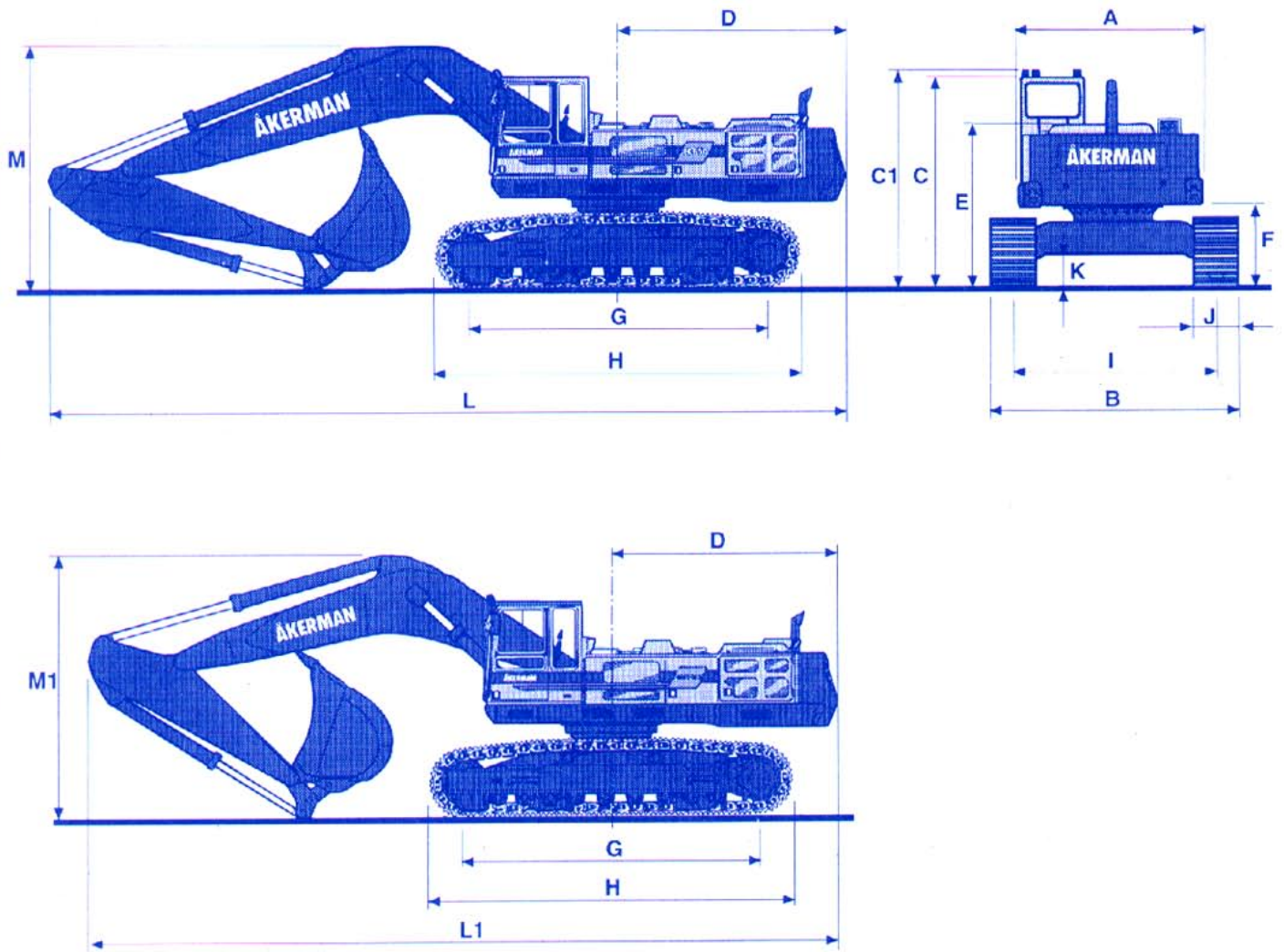
<b>Boom</b>	<b>m</b>	<b>7,6</b>	BE
<b>Dipper arm</b>	<b>m</b>	<b>3,25</b>	
Max reach	m	13,3	
Max. reach at ground level	m	13,1	
Max. digging depth	m	8,4	
Max. height, ground			
– tooth tip	m	13,3	
Max. dumping height	m	9,3	
Max. practical dumping height	m	6,5	
Practical digging depth at a repose			
of material of 45°	m	6,9	
Max. vertical digging depth	m	5,2	
Min. swing radius in front	m	4,8	

## MASS EXCAVATOR EQUIPMENT



<b>Boom</b>	<b>m</b>	<b>6,6</b>	ME
<b>Dipper arm</b>	<b>m</b>	<b>2,75</b>	
Max reach	m	11,7	
Max. reach at ground level	m	11,4	
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	2,5	
Min. swing radius in front	m	4,7	

## DIMENSIONS



A:	mm	3 030	H:	mm	5 980
B:	mm	4 150	I:	mm	3 350
C:	mm	3 600	J:	mm	800
C1:	mm	3 740	K:	mm	630
D:	mm	3 840	L:	mm	13 280 (BE-Equipment)
E:	mm	2 850	L1:	mm	12 490 (ME-Equipment)
F:	mm	1 440	M:	mm	4 150 (BE-Equipment)
G:	mm	4 730	M1:	mm	4 650 (ME-Equipment)

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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Ref. No. 21 1 430 0073 ENGLISH (global)  
 Printed in Sweden 02.03.95