



# Åkerman EC450

The strongest 45 t machine  
on the market

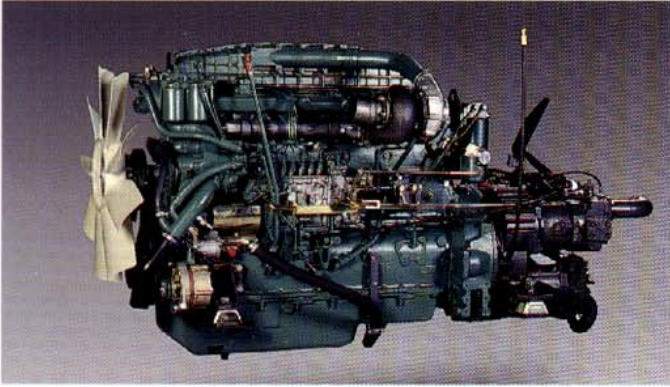


**ÅKERMAN**

# EC450's strongest points

## Highest engine output in its class

The robust Volvo engine generates 227 kW net at only 1700 r/min. This is best in its class.



## Low emissions

The 12 litre engine is fitted with an intercooler and an efficient turbo. The engine's combustion chambers have had their design improved and the injection pressure of the fuel has been raised, all in order to achieve more efficient combustion.

This means that emissions comply with requirements that will apply in the USA from 1996 and in Europe from 1997!

## Best breakout force

Breakout force, measured with a 2100 l rock bucket with a bucket radius of 1800 mm is 285 kN.

Tearout force of 233 kN is comparable with the best in this class.

## Best lifting capacity

The wide, long undercarriage with a full-height counterweight of 8,5 tonnes makes this machine so stable that lifting force can be fully utilized in HLD. At a reach of 7,5 m, the machine can handle 10 tonnes with bucket.

## Heavy Duty quickfit (optional)

After 18 years of development, we can, with good conscience, recommend our own robust Åkerman quickfit, even for the 45 tonne machines.

A wide range of attachments, such as rippers, hammer plates, rock and excavation buckets are available for the EC450 quickfit.

## 3 circuit hydraulics with priority valve block

This system makes it possible for the operator to always use the entire hydraulic output, without the system having to compromise its order of priority. One pump prioritizes the swing, one the dipper arm and one the boom and bucket.

In other words, this is a 45 tonne machine that you can also use to finely adjust road slope at full speed.

## Comfort Cab – now even better

To claim that Åkerman machines have large comfortable cabs is no exaggeration. Now, we have made life even easier for those who operate the EC450. The daily check of engine oil level and coolant level is made from the cab, and the engine is started and stopped electrically.

## Floating position as standard

Our patented floating position provides the operator with many advantages. Cleaning top soil from rock is easier, wear is less and less vibration is transmitted to the cab and machine.

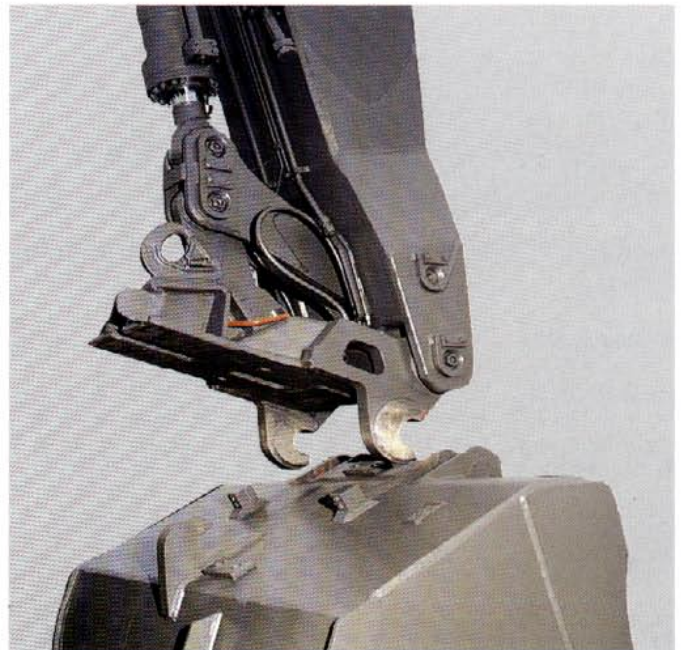
In addition, capacity is increased as no hydraulic power is required to lower the boom.

## Link bearings in entire digging equipment

Steel spherical link bearings are also able to absorb a certain amount of lateral force. For this reason, we have chosen to use this type of bearing for the larger excavators. The bearings are sealed and last for many thousand of hours without becoming worn out.

## Swing ring in oil bath

The ball-bearing swing ring is a precision component and must be lubricated regularly. We have chosen to place it in an oil bath. This is just one of the design features which shows the robust construction of an Åkerman machine.



Åkerman Heavy Duty quickfit



Newly designed digging equipment,  
designed for robotic welding.  
Dipper arm length: 2.5 or 3.5 m.

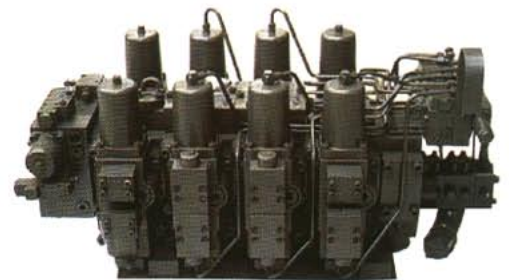
Hydraulic cylinders with double piston  
rod seals and friction-welded piston rod.  
Surface hardness 850 HB (Brinell).

Hydraulic oil cooler of partial flow type.  
This means that full cooling effect is  
even achieved during intensive  
hydraulic hammer work. Suction fan.



Volvo 12 litre low emission engine. Intercooler cooled directly from engine radiator using an extra pump. Three stage, efficient air filter and water separating fuel filter. Instrument check for oil and coolant. 227 kW net output at 1700 r/min.

Dual 4-way valves for each digging movement. Priority connected valve block and three circuit hydraulics for precision excavation and flexibility when using optional equipment.



Full-height counterweight with shorter tail radius. Engine silencer is built into the counterweight.

Stable undercarriage with built-in planetary gears. Travelling speed 3,7 km/h. Maintenance free central passage and swing ring in oil bath.



# Rules of thumb for the Åkerman machine Mode Selector

Using a switch on the operator lever, well positioned for the thumb, the operator is easily able to reset the hydraulic system for various operating conditions.



**ECO** This is an economy mode, where 2 working pumps are used for digging movements, while a third supplies the swing movement, and any slope buckets, with hydraulic oil. For precision work.

**CAP** The capacity mode is set when work needs to be as quick as possible. All 3 pumps are connected to the digging equipment hydraulic cylinders, but swing movement is prioritized with flow from one of the pumps.



**HLD** In this mode, pressure in the system increases to 35 MPa (standard pressure is 31 MPa). Digging and lifting forces increase correspondingly.





## Technical data

Engine	Volvo TD 122KKE	
Output ISO 9249/DIN 6271	227 kW/304 hp	
Engine speed, r/min	1700 (28 r/s)	
Dipper arm	2,5 m	3,5 m
Reach, m	11,3	12,3
Digging depth, m	6,8	7,8
Rock bucket, 2 t/m <sup>3</sup> , l	2500*	2100*
Backhoe bucket, 1,8 t/m <sup>3</sup> , l	2900	2400*
Light materials bucket, 1,5 t/m <sup>3</sup> , l	3400	2900
Machine weight with 700 mm tracks	45 t	

\* Available from factory

VME Group is a major international company in the business of designing, manufacturing and marketing earthmoving and construction equipment carrying the brand names Volvo BM, Michigan, Euclid, Zettelmeyer and Åkerman.

VME Group is the world's leading producer of

articulated haulers and one of the leading producers of wheel loaders, excavators and rigid haulers.

VME innovations, such as the articulated hauler concept, Automatic Power Shift, hydraulic attachment bracket, limited slip differentials, parallel linkage etc. have been instrumental in establishing industry product standards.

*Under our policy of continuous product improvement, we reserve the right to change specifications or design without prior notice. Illustrations do not necessarily show standard versions of the machines.*

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