Åkerman EW130

2 - piece boom

- ***Engine Power:***
  76 kW (103 hp)
- ***Operating Weight:***
  12,3 – 13,3 t
- ***Buckets:***
  170 – 600 l

- *Direct injection, turbocharged engine*
- *Åkerman three-circuit hydraulic system and newly developed pump regulation PSC. (PSC = Pressure Sensing Control)*
- *New Comfort cab*
  - *computerized control and warning system*
  - *ergonomic environment*
  - *low sound level*
  - *filtered air*
- *Highest flexibility for extra equipment/hydraulics*
- *Hydraulic quickfit*
- *Individually operated outriggers and dozer blade*
- *Permanent 4-wheel drive*
- *Four travel speeds – max. 30 km/h*

ÅKERMAN

ENGINE

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

Model			VME TD40GB	
Net output at	r/s	(r/min)	36,7	(2200)
ISO 3046 / DIN 6271*	kW	(hp)	76	(103)
No. of cylinders			4	
Displacement, total	l		4,0	
Bore	mm		100	
Stroke	mm		127	

* = Fan excluded

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 optional equipment. Battery disconnector standard.

Voltage	V	24
Battery	V	4 x 12
Battery capacity	Ah	120
A.C. Generator	V/A	28/60
Alternator rating	W	1680

SLEWING SYSTEM

The superstructure is slewed by a two-step 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	4,3
180° turn	s	6,5

* *Empty bucket and extended equipment.*

BRAKES

Brake system corresponds to ISO 3450.
Service brakes consist of a 2-circuit oil servo system with drum brakes on each axle.
Parking brake of drum type mounted on the gearbox. It is activated by spring power and servo released.
Digging brake without play is obtained through the same drum brake system.
Security system: The 2-circuit travel brakes are supplied with two accumulators in the event of failure in the service brake system.

UNDERCARRIAGE

Drive Train: One big variable piston motor on the mid-mounted two-step gearbox gives power to front and rear axles, both with hub reductions.

Framework: All-welded robust torsion box frame.

Wheels: Alternative single and twin wheels available.

Front axle: Oscillating ±7°.

Twin wheels, standard		9.00 - 20 PR14
Max tractive force	kN	81,2
Travel speed, road travel	km/h	30,0
Travel speed, site travel	km/h	7,8
Turning radius, front wheels	m	6,55

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 headrest and individually adjustable armrests and hand controls.

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

SERVICE REFILL CAPACITIES

Fuel tank	l	225
Fuel pump capacity	l/min	90
Hydraulic system, total	l	220
Diesel engine	l	8,1
Cooling system (incl. glycol)	l	32,0
Travel gearbox	l	4,0
Slew gearbox	l	15,0

HYDRAULIC SYSTEM

Åkerman 3-circuit system all-servo controlled.

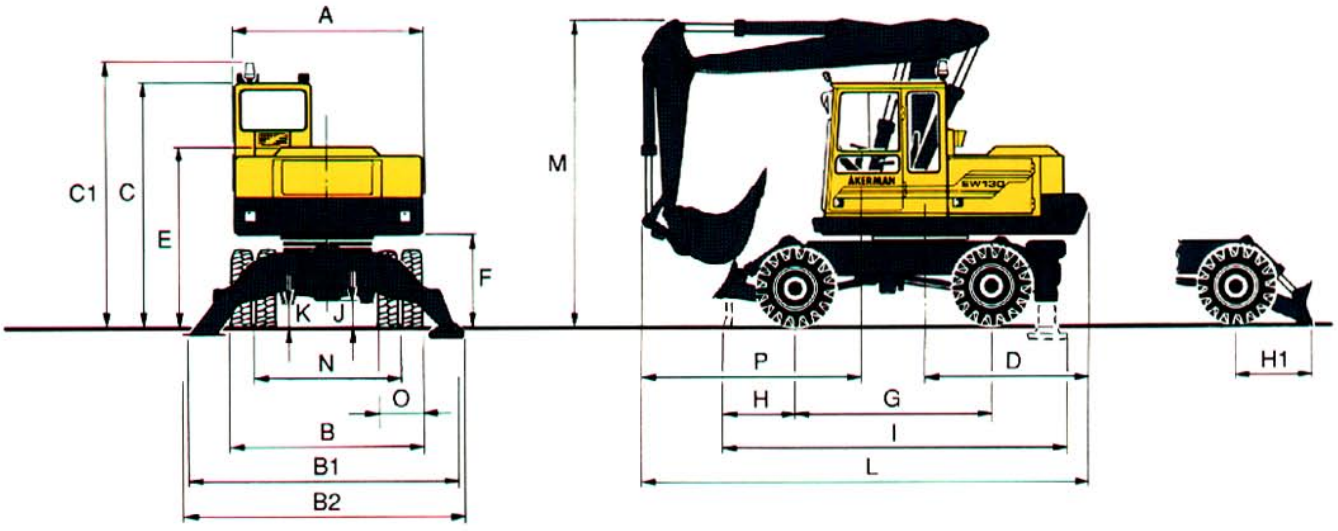
Pumps: P1 is a fixed axial piston pump to slew circuit. P2 /P3 is a dual power controlled variable piston pump.

Mode selector: Two working modes:
ECO = Travel
CAP = Digging and travel

Valve system: Boom is 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	31
Max. flow	l/min	46
Pumps P2 and P3		
Max. pressure	MPa	24
Max. flow	l/min	2 x 81
Servo pump		
Pressure	MPa	6,5
Flow	l/min	23
Steering pump		
Pressure	MPa	14
Flow	l/min	23

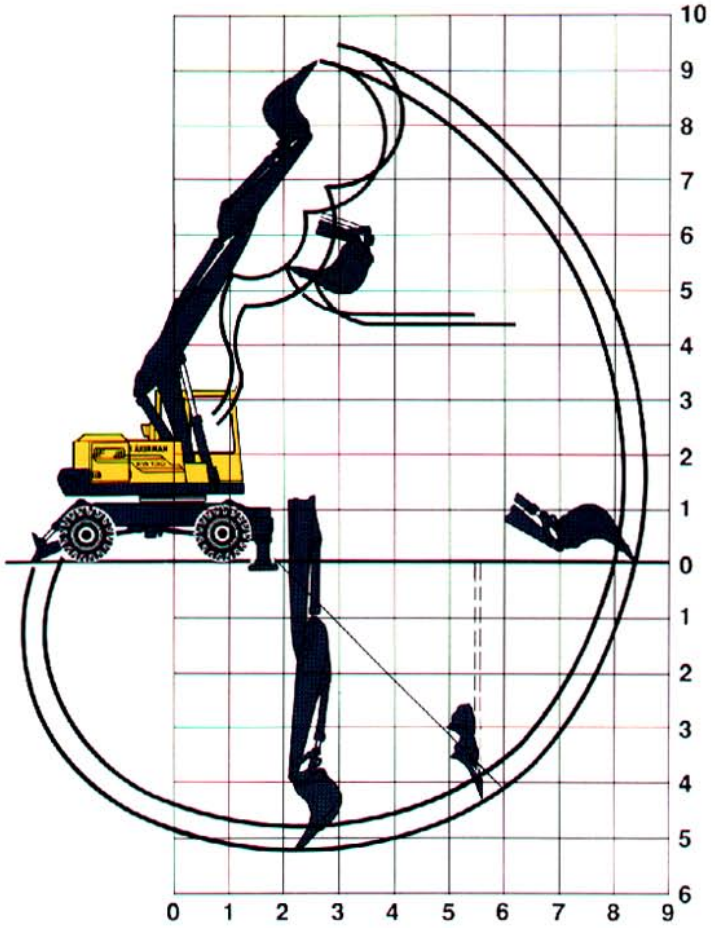
DIMENSIONS



A:	mm	2 430	
B:	mm	2 500	
B1:	mm	3 530	
B2:	mm	3 530	
C:	mm	3 120	
C1:	mm	3 400	
D:	mm	2 100	
E:	mm	2 300	
F:	mm	1 180	
G:	mm	2 500	
H:	mm	980	
H1:	mm	980	

I:	mm	4 430	
J:	mm	350	
K:	mm	300	
L:	mm	5 642	*(1,9 m arm)*
L:	mm	5 720	*(2,4 m arm)*
M:	mm	3 980	*(1,9 m arm)*
M:	mm	3 980	*(2,4 m arm)*
N:	mm	1 910	
O:	mm	580	
P:	mm	2 757	*(1,9 m skaft)*
P:	mm	2 896	*(2,4 m skaft)*

WORKING RANGES



2 - piece boom	**m**	**4,6**	
Dipper arm	**m**	**1,9**	**2,4**
Max. reach	m	8,1	8,5
Max. reach at ground level	m	7,9	8,3
Max. digging depth	m	4,8	5,2
Max. height, ground – tooth tip	m	9,1	9,4
Max. dumping height	m	6,4	6,8
Max. practical dumping height	m	4,5	4,3
Practical digging depth at a repose of material of 45°	m	3,8	4,1
Max. vertical digging depth	m	3,8	4,2
Min. slewing radius in front	m	2,5	2,7

DIGGING FORCE

Bucket digging force*	kN	68
Dipper arm force*	kN	52

** HD-bucket, 600 l SAE, and 1,9 m dipper arm.*

BUCKET AND ARM COMBINATIONS

BUCKETS	Volyme SAE l	Cutting width mm	Weight kg	Fitting *	Suitable for arm 1,9 m	Suitable for arm 2,4 m
Backhoe buckets	500 600	930 1000	390 450	QF QF	• •	•
Articulated slope bucket	450	1400	460	QF	•	•
Cable bucket	170	490	235	QF	•	•

** QF = Quickfit*

WEIGHT AND AXLE LOAD

Standard machine, 1,9 m dipper arm, quickfit,
600 l bucket and counterweight 1 150 kg.

Total machine weight (incl. dozer blade and outriggers)	kg	13 300	Machine weight (incl. dozer blade rear)	kg	12 400
Axle load			Axle load		
Front axle	kg	4 600	Front axle	kg	4 200
Rear axle	kg	8 700	Rear axle	kg	8 200

STABILITY AND LIFTING CAPACITIES

In the quick fit lifting hook without bucket. Unit: 1000 kg.

Across carriage / Along carriage	Lifting hook related to ground level	Reach from machine centre																Max. reach						Max. m
		3,0 m				4,5 m				6,0 m				7,5 m										
1,9 m arm Quickfit Support down	7,5 m																							
	6,0 m					5,71	2,69	9,43	2,69									4,05	2,59	6,57	2,59			5,5
	4,5 m	11,1	3,87	21,1	3,87	5,47	2,96	9,08	2,96	3,46	2,50	5,59	2,50					3,03	2,40	4,90	2,40			6,5
	3,0 m					5,11	3,37	8,63	3,37	3,32	2,64	5,42	2,64					2,63	2,32	4,28	2,32			7,0
	1,5 m					4,82	3,75	8,30	3,75	3,19	2,73	5,27	2,73					2,51	2,27	4,11	2,27			7,1
	0,0 m					4,69	3,67	8,16	3,67	3,10	2,67	5,17	2,67					2,57	2,17	4,24	2,17			6,9
	-1,5 m	9,49	4,27	19,2	4,27	4,68	3,14	8,14	3,14	3,11	2,20	5,19	2,20					2,92	1,95	4,84	1,95			6,3
	-3,0 m																							
2,4 m arm Quickfit Support down	7,5 m					5,76	2,66	9,55	2,66									5,76	2,66	9,55	2,66			4,5
	6,0 m					5,79	2,39	9,55	2,39	3,54	2,28	5,70	2,28					3,43	2,28	5,53	2,28			6,1
	4,5 m					5,58	2,68	9,23	2,68	3,49	2,31	5,63	2,31					2,69	2,15	4,35	2,15			7,0
	3,0 m					5,21	3,15	8,79	3,15	3,35	2,49	5,46	2,49	2,35	2,09	3,84	2,09	2,35	2,09	3,84	2,09			7,5
	1,5 m					4,87	3,62	8,38	3,62	3,19	2,64	5,28	2,64	2,30	2,09	3,78	2,09	2,25	2,05	3,70	2,05			7,6
	0,0 m	9,29	5,64	19,0	5,64	4,68	3,70	8,17	3,70	3,08	2,67	5,16	2,67					2,30	2,00	3,80	2,00			7,4
	-1,5 m	9,34	4,79	19,0	4,79	4,64	3,33	8,12	3,33	3,05	2,39	5,12	2,39					2,58	1,89	4,29	1,89			6,8
	-3,0 m					4,70	2,35	8,19	2,35									3,52	1,74	5,93	1,74			5,5
2,4 m arm Quickfit Support up	7,5 m																							
	6,0 m					3,69	2,69	3,75	2,69									2,62	2,59	2,70	2,59			5,5
	4,5 m	6,59	3,87	6,53	3,87	3,50	2,96	3,57	2,96	2,23	2,50	2,31	2,50					1,94	2,40	2,02	2,40			6,5
	3,0 m					3,20	3,37	3,27	3,37	2,12	2,64	2,20	2,64					1,66	2,32	1,74	2,32			7,0
	1,5 m					2,94	3,75	3,02	3,75	1,99	2,73	2,08	2,73					1,57	2,27	1,65	2,27			7,1
	0,0 m					2,82	3,67	2,91	3,67	1,92	2,67	2,00	2,67					1,60	2,17	1,68	2,17			6,9
	-1,5 m	5,25	4,27	5,26	4,27	2,82	3,14	2,91	3,14	1,92	2,20	2,01	2,20					1,81	1,95	1,89	1,95			6,3
	-3,0 m																							

Tipping load *

Hydr. lifting capacities **

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

Working pressure = 24 MPa (240 bar)

STANDARD EQUIPMENT

Engine and electrical system
Computer controlled monitoring system
Battery disconnector and main fuel tap
3-step air filter:
precyclone
main filter
safety filter
with electronic service indicator
Hour meter
Cold start aid
Revs counter
Fuel meter
Temperature meter for cooling fluid and hydraulic oil
24 volt electrical system with 4 standard batteries

Undercarriage
Twin wheels 9.00 – 20 PR14
Dozer blade in front, and two outriggers rear
4-wheel drive
Oscillating front axle ±7°
Axles with hub reduction
2-circuit travel brakes

Superstructure
Counterweight 1150 kg

Safety and Comfort
Cab heating with 14 outlets
Filtered air intake
Cab skylight
Emergency exit through rear window
Ergonomically designed and adjustable operator's seat
Rear view mirrors,
2 exterior
1 interior
Lights:
headlights,
full and dipped beam
asymmetrical, halogen
3 working lights, front, halogen
1 working light, rear, halogen
Brakelights
Rear lights
Direction indicators
Instrument lighting
Illuminated cab, engine
compartment and fuel filling compartment
Safety bar for control levers
Double intermittent windscreen wipers
Rotating beacon
Hazard flashas
Windscreen washers
Hydraulic refuelling pump, 90 l/min
Compressor horn
Hose rupture valve on boom cylinder

Hydraulics
One dual power controlled axial piston working pump
One fixed axial piston pump to slew curcuit
Mode selector, 2 steps
Standard filter cartridges for return, leak oil and breathing filter
Float position on boom
Refilling pump for hydraulic oil

Equipment
2 piece boom, 4,6 m
1,9 m dipper arm
Hydraulic quickfit
End dampening on dipper and bucket cylinders
Security lifting hook
Friction welded piston rod eyes

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
Exhaust ejector connected to precyclone
Oil bath precleaner fot inlet air

Undercarriage
Twin wheels 10.00 – 20 PR14
Single tyres
Mud guards
Stone protection rings
Widening rings 2x50 mm
Oscillating outriggers plates
Dozer blade, rear
Tow hook
Tool box

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
Operator's seat with heating coils
Seat belts
Rear window jalousie
Air conditioning
Fine filter for the cab
Micro filter for the cab
Extra circulation pump for the heating system
Radio and cassette player
Extra hose rupture valves
Tropical cab roof

Hydraulics
Hydraulic equipment for:
slope bucket
grab
hydraulic hammer
Biologically degradable oil

Equipment
Dipper arm 2,4 m
Extra headlights on the boom
Automatic lubrication
Various buckets
Hammer plate
Grab holder
Ripper tooth

VME Excavators AB
Box 115, S-241 22 ESLÖV SWEDEN

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