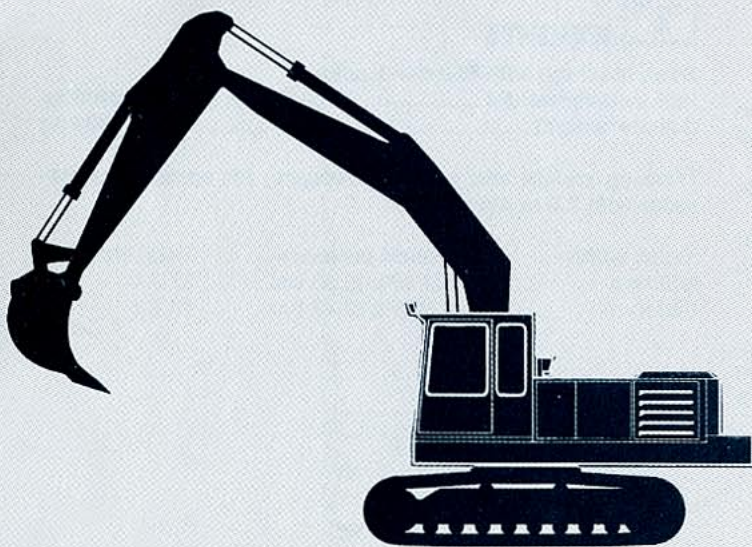
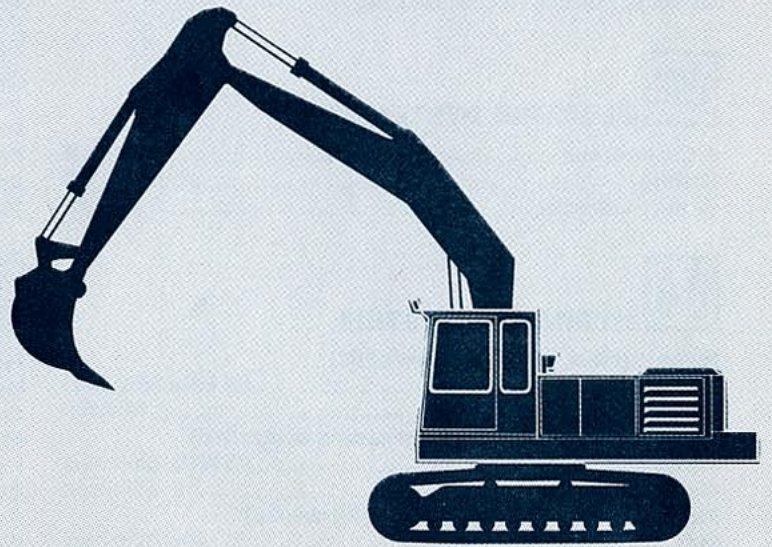


AKERMAN H14^B

English 13



BASE MACHINE



DIESEL ENGINE

VOLVO TD71ACE

The TD71ACE is a turbocharged 6-cylinder, 4-stroke diesel engine with water cooling and direct injection.

Output at 2000 rpm 154 kW (209 hp)

(According to ISO 3046 and DIN 6271)

Cylinder diameter 104.77 mm

Piston stroke 130 mm

Stroke volume 6.73 dm³

The engine is equipped with an electric starter element to facilitate starting in cold weather.



ELECTRIC SYSTEM, 24V

A.C. Generator 28V/45A

Battery 4 pcs. (12V)

Battery capacity 2 x 60 Ah



HYDRAULIC SYSTEM

Pump 1 (slew, pressure controlled)

Max. pressure 26 MPa (260 bar)

Max. flow 110 l/min

Pumps 2 and 3 (power and pressure controlled)

Max. pressure 26 MPa (260 bar)

Max. flow 2 x 170 l/min

Pumps 2 and 3 with HLD (heavy lift device)

Max. pressure 30 MPa (300 bar)

Servo pump

Pressure 6.5 MPa (65 bar)

Flow about 20 l/min



SLEWING SYSTEM

The superstructure is slewed by an axial piston motor. Cab lock, slew gearbox and slew drive shaft are geared between the slew motor and the inner tooth race of the slew ring.

Slewing speed 6.0 rpm

90° turn from start to stop 4.8 s

180° turn from start to stop 7.1 s

(Bucket empty - equipment extended)



UNDERCARRIAGE

Travel

Each track is powered by a hydraulic motor of axial piston type. The track brake and a three step gearbox are situated between the drive wheel and motor.

The track brakes are of multiple-plate type and are activated by spring power and hydraulically released.

Max. tractive effort 257 kN (26.2 Mp)

Track speed, high speed/low speed 2.8 / 2.1 km/h

Tracks

Track chain B6 - specially reinforced for excavator use.

Number of track plates each side 46 pcs.

Track width 650 (880) mm

Rollers each side 8 bottom rollers and 2 top rollers



CYLINDER DATA

Boom cylinder

Internal diameter 200 mm

Piston rod diameter 125 mm

Piston stroke 1500 mm

Piston force, out 817 kN (83.3 Mp)

Piston force, out with HLD 942 kN (96.1 Mp)

Dipper arm cylinder

Internal diameter 180 mm

Piston rod diameter 125 mm

Piston stroke 1400 mm

Piston force, out 662 kN (67.4 Mp)

Piston force, out with HLD 763 kN (77.8 Mp)

Bucket cylinder

Internal diameter 140 mm

Piston rod diameter 90 mm

Piston stroke 1100 mm

Piston force, out 400 kN (40.8 Mp)

Piston force, out with HLD 462 kN (47.1 Mp)



VOLUMES

Fuel tank 340 l

Hydraulically driven fuel pump, capacity 90 l/min

Cooling system (incl. glycol) 31 l

Hydraulic system, total 430 l

Hydraulic oil tank 260 l

Diesel engine (lubricating oil) 25 l

Pump gearbox 2.8 l

Slew gearbox 26 l

Slew ring 20 l

Travel gearbox 2 x 23 l



SOUND LEVEL

Surroundings (10 metres distance from the machine)

Average value L_{pA} (acoustic pressure) 78 dB(A)

Average value L_{wA} (acoustic power) 106 dB(A)

(According to ISO 6393)

Inside the cab with the door closed

L_{pA} (acoustic pressure) 75 dB(A)

(According to ISO 6394)

Approved according to 86/662/EEC



WEIGHTS

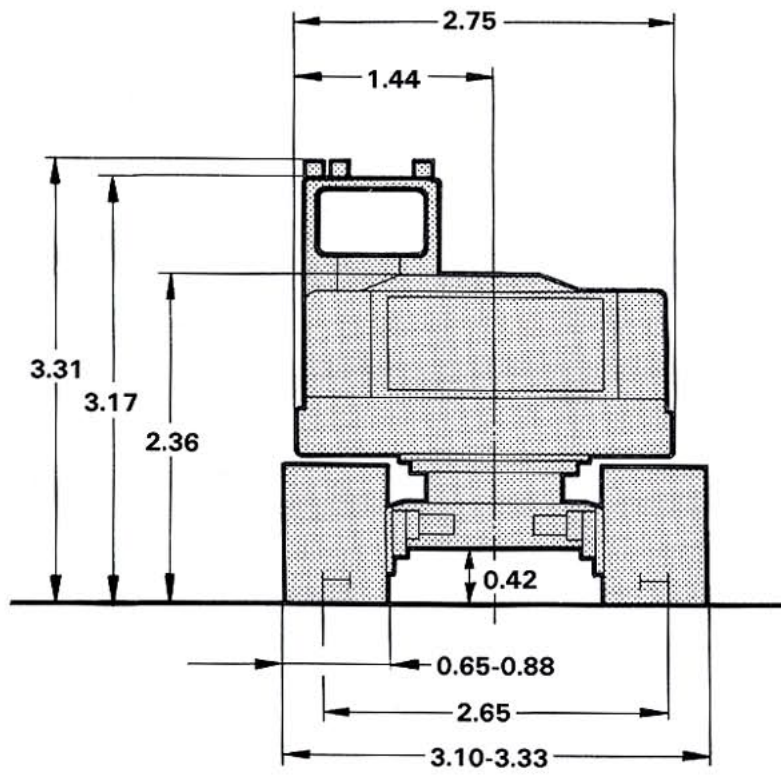
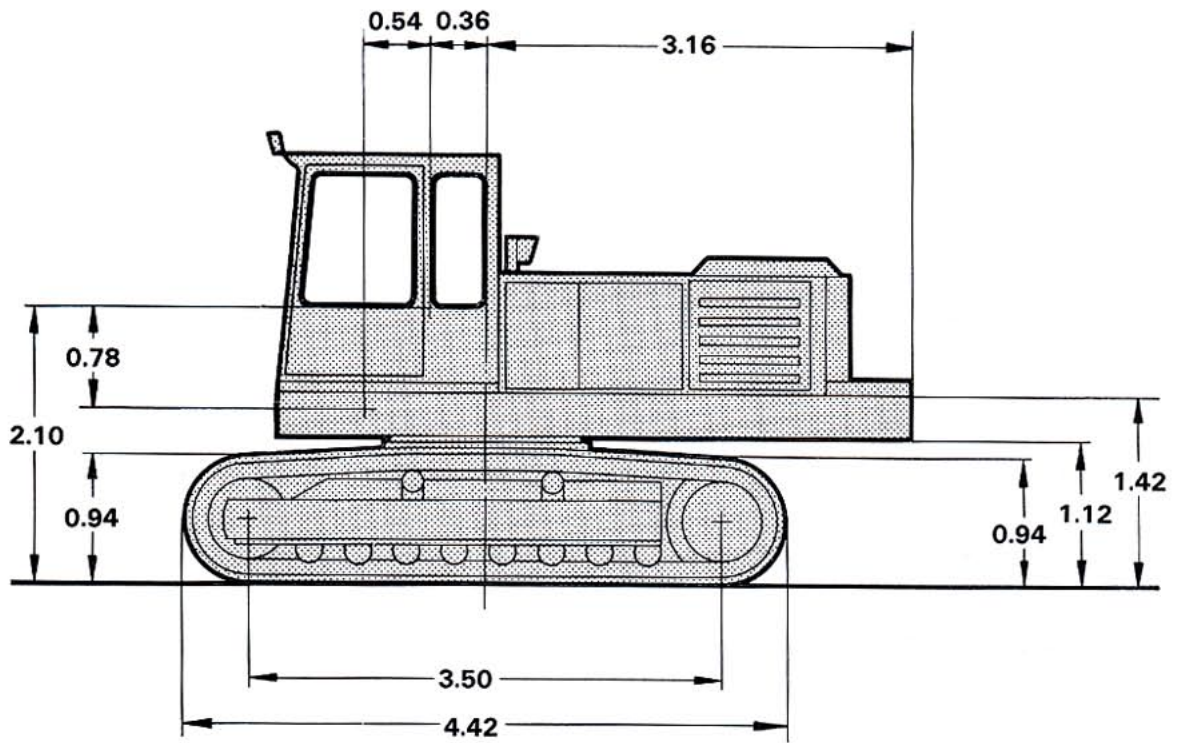
Base machine with 650 mm tracks,

incl. counterweight 22460 kg

Counterweight 3000 kg

Working weight and ground pressure, for complete excavator with 2.5 m dipper arm.

Track width	Ground pressure	Total weight
650 mm	54.7 kPa (0.55 bar)	27.7 t
880 mm	41.9 kPa (0.42 bar)	28.6 t



BACKHOE EQUIPMENT

BACKHOE EQUIPMENT

	LENGTH	WEIGHT
Boom incl. dipper cylinder	5.87 m	2430 kg
Dipper arm, compl. incl. bucket cylinder	2.5 m	1250 kg
Dipper arm, compl. incl. bucket cylinder	3.2 m	1460 kg

BUCKETS	Capacity		Cutting Width	Weight	Suitable for dippers	
	CECE	SAE			2.5m	3.3m
	litres	litres	mm	kg		
HEAVY DUTY/ TRENCHING	600	655	615	680	●	●
	750	835	750	860	●	●
	900	1105	900	875	●	●
	1020	1020	920	840	●	●
	1050	1050	1050	960	●	●
	1100	1255	1000	975	●	X
	1200	1250	1200	1125	●	N.A.
	1300	1505	1100	1150	X	N.A.
BULK	1350	1425	1360	1200	X	N.A.
	1500	1650	1400	1050	●	N.A.
	1500	1700	1600	1200	X	N.A.
DITCHING/ LOADING/ DITCH CLEANING	1600	1700	1450	1100	X	N.A.
	760	900	2000	590	●	●
CLAYFORK	1100	1260	1800	900	●	●
	1600	1800	1600	1280	●	N.A.

- Most buckets are available with standard or quickfit mountings.
- X Only permissible if extra 1000 kg counterweight is specified.

The choice of bucket capacity depends on the specific weight of the material handled, the length and composition of the digging equipment and the nature of the ground on which the machine is standing. Åkerman bucket capacities are normally calculated using the following material densities:

Heavy duty/Trenching	2.0 t/m ³
Bulk/Ditching/Loading/Ditch cleaning/Clayfork	1.5 t/m ³

DIGGING FORCE

	Dipper arm 2.5 m	Dipper arm 3.2 m
Digging force at bucket teeth due to bucket cylinder. (Bucket at 125° rotation)	178 kN (18.1 Mp)	
Digging force at bucket teeth due to bucket cylinder. (Bucket at 157° rotation)	150 kN (15.3 Mp)	144 kN (14.6 Mp)
Digging force at bucket teeth due to dipper arm cylinder	143 kN (14.5 Mp)	120 kN (12.3 Mp)

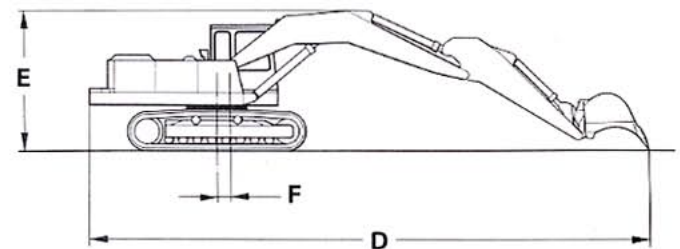
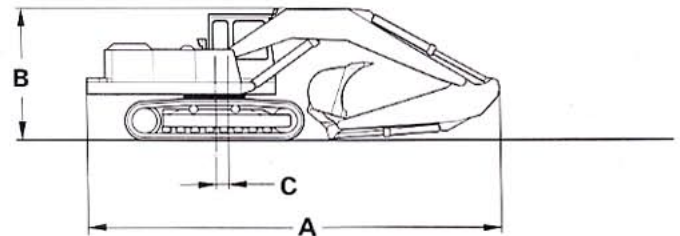
Digging forces are calculated with Åkermans' standard buckets.

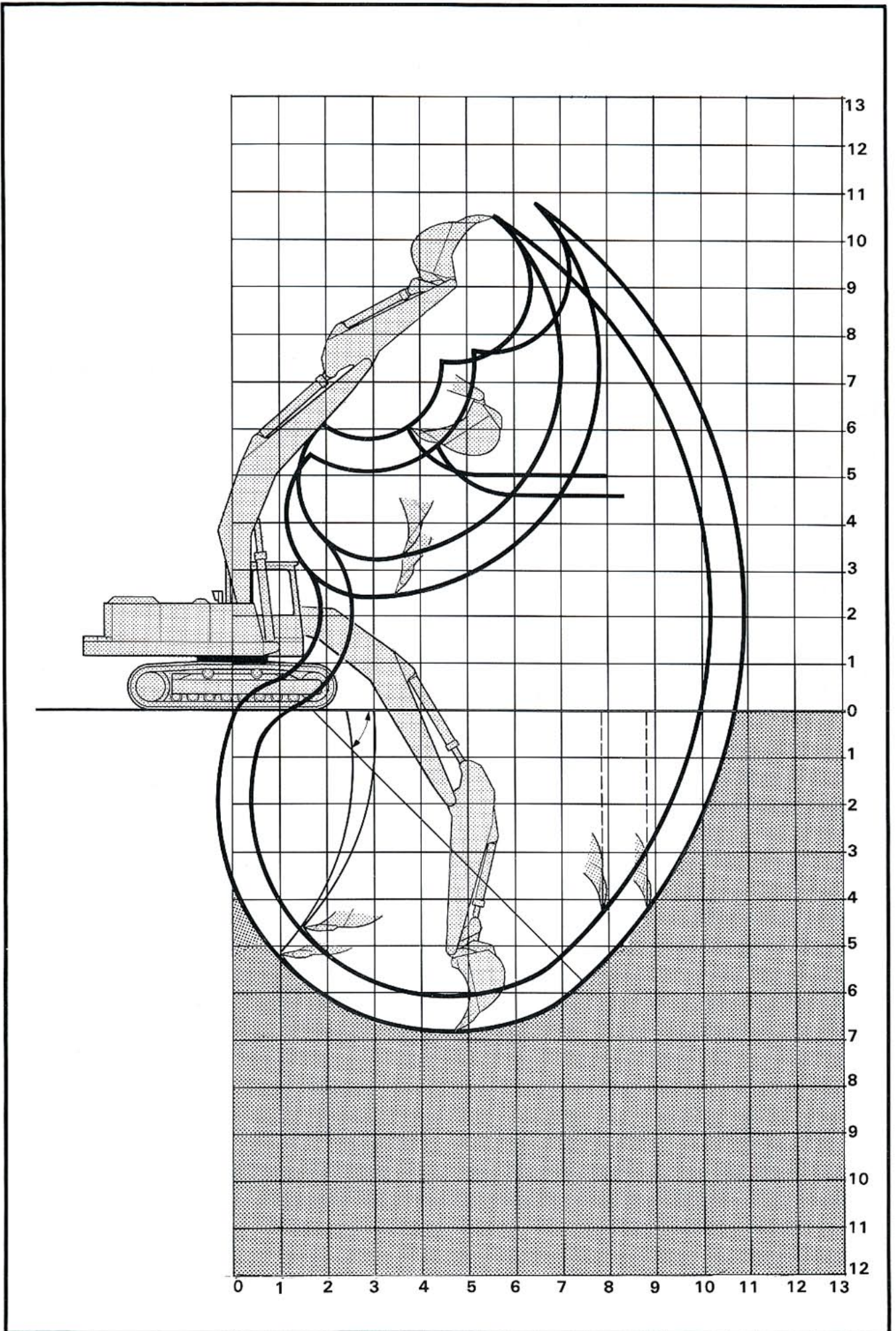
DIGGING DATA

	Dipper arm 2.5 m	Dipper arm 3.2 m
Max. reach at ground level	10.1 m	10.8 m
Max. digging depth	6.1 m	6.9 m
Max. height, ground - tooth tip	10.5 m	10.7 m
Max. dumping height	7.4 m	7.5 m
Max. practical dumping height	5.0 m	4.6 m
Practical digging depth at a repose of material of 45°	5.3 m	5.7 m
Max. vertical digging depth	4.3 m	4.3 m
Max. reach, slewing centre - bucket attachment	8.6 m	9.2 m
Max. height, ground - bucket attachment	9.0 m	9.3 m
Min. slewing radius in front	4.1 m	4.0 m

TRANSPORT DATA

Min. transport length with folded equipment (A)	10.3 m	10.3 m
Min. transport height with folded equipment (B)	3.31 m	3.31 m
Distance slewing centre - centre of gravity folded equipment (C)	0.32 m	0.29 m
Total length with extended equipment (D)	13.2 m	13.9 m
Min. transport height with extended equipment (E)	3.32 m	3.52 m
Distance slewing centre - centre of gravity extended equipment (F)	0.53 m	0.64 m





LIFTING CAPACITY

MAX LOAD IN DIPPER PIN (kg) = 71.4% OF THE TIPPING LOAD (UK NORM)

A = Height of bucket attachment (m) B = Reach of load from centre (m)

WITH 2.5 m DIPPER ARM

ALONG TRACK

A \ B	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	Max. reach
7				6870*	6280				6280 /B= 7.0
6				7130*	6300				5440 /B= 7.6
5		9730*	8460*	7780*	6210	4960			4840 /B= 8.1
4		12680*	10020*	7750	6080	4910			4510 /B= 8.4
3			9950	7500	5930	4830			4380 /B= 8.5
2			9570	7270	5780	4740			4250 /B= 8.6
1			9330	7090	5660	4670			4280 /B= 8.5
0		13420	9200	6980	5580	4630			4400 /B= 8.3
-1	11740*	13440	9160	6930	5550	4640			4640 /B= 8.0
-2	19930*	13530	9200	6940	5580				5100 /B= 7.5
-3	21860*	13690	9300	7030					5930 /B= 6.8
-4		13960	9510						7450 /B= 5.9
-5									
-6									

WITH 2.5 m DIPPER ARM

ACROSS TRACK

A \ B	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	Max. reach
7				5970	4530				4530 /B= 7.0
6				5880	4550				3920 /B= 7.6
5		9730*	7600	5720	4470	3550			3470 /B= 8.1
4		10090	7220	5500	4350	3510			3220 /B= 8.4
3			6820	5260	4200	3430			3110 /B= 8.5
2			6490	5050	4070	3350			3000 /B= 8.6
1			6280	4890	3960	3290			3010 /B= 8.5
0		8570	6160	4790	3890	3250			3090 /B= 8.3
-1	11740*	8590	6130	4750	3860	3250			3250 /B= 8.0
-2	14370	8660	6160	4760	3880				3570 /B= 7.5
-3	14560	8800	6250	4840					4140 /B= 6.8
-4		9030	6440						5180 /B= 5.9
-5									
-6									

Loads marked with an asterisk (*) are limited by the hydraulic lifting capacity. Other loads limited due to machine stability.

Working pressure with HLD = 30 MPa (300 bar).

NOTE: To comply with the requirements of the Construction (Lifting Operations) Regulations, excavators, when used as cranes, must have the protection of checkvalves on all lifting cylinders to prevent gravity fall of the load in the event of a failure.

Lifting tables are presented for reference only. When fitting safe load indicators and other equipment to comply with lifting regulations, the load to be lifted is rated at the dipper pin (excluding bucket weight) and for safety considerations only the minimum load which can be lifted at any particular radius should be specified.

LIFTING CAPACITY

MAX LOAD IN DIPPER PIN (kg) = 71.4% OF THE TIPPING LOAD (UK NORM)

A = Height of bucket attachment (m) B = Reach of load from centre (m)

WITH 3.2 m DIPPER ARM

ALONG TRACK

A \ B	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	Max. reach
7					6020*				5410 /B= 7.7
6				6020*	6120*	5060			4720 /B= 8.3
5				6700*	6270	5010			4310 /B= 8.7
4		10260*	8560*	7630*	6110	4920	4020		4020 /B= 9.0
3		13350*	10100	7550	5930	4810	3970		3890 /B= 9.1
2		13920	9640	7270	5750	4700	3910		3770 /B= 9.2
1		13440	9300	7040	5600	4600	3850		3790 /B= 9.1
0	8810*	13220	9090	6880	5490	4520			3880 /B= 8.9
-1	13430*	13150	8990	6790	5420	4480			4060 /B= 8.6
-2	18720*	13180	8970	6760	5400	4490			4360 /B= 8.2
-3	23590*	13300	9020	6800	5450				4890 /B= 7.6
-4	21510*	13510	9170	6920					5830 /B= 6.8
-5		13860	9450						8400 /B= 5.4
-6									

WITH 3.2 m DIPPER ARM

ACROSS TRACK

A \ B	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	Max. reach
7					4670				3900 /B= 7.7
6				5990	4620	3640			3380 /B= 8.3
5				5800	4510	3590			3070 /B= 8.7
4		10260*	7380	5560	4360	3510	2840		2840 /B= 9.0
3		9660	6940	5300	4200	3400	2790		2740 /B= 9.1
2		8970	6540	5040	4030	3300	2740		2640 /B= 9.2
1		8570	6230	4840	3890	3210	2690		2640 /B= 9.1
0	8810*	8380	6050	4690	3780	3140			2700 /B= 8.9
-1	13430*	8320	5950	4600	3720	3100			2820 /B= 8.6
-2	13790	8350	5940	4580	3700	3110			3020 /B= 8.2
-3	13970	8450	5990	4610	3750				3390 /B= 7.6
-4	14260	8620	6110	4720					4040 /B= 6.8
-5		8920	6360						5720 /B= 5.4
-6									

Loads marked with an asterisk (*) are limited by the hydraulic lifting capacity. Other loads limited due to machine stability.

Working pressure with HLD = 30 MPa (300 bar).

NOTE: To comply with the requirements of the Construction (Lifting Operations) Regulations, excavators, when used as cranes, must have the protection of checkvalves on lifting cylinders to prevent gravity fall of the load in the event of a failure.

Lifting tables are presented for reference only. When fitting safe load indicators and other equipment to comply with lifting regulations, the load to be lifted is rated at the dipper pin (including bucket weight) and for safety considerations only the minimum load which can be lifted at any particular radius should be specified.

EXTRA EQUIPMENT

EXAMPLES OF EXTRA EQUIPMENT AVAILABLE FOR THE ÅKERMAN H14B

Dipper arm 3.2 m.

Electrically heated seat, air conditioning, radio with cassette recorder, and tinted glass to improve operator comfort.

Quickfit device

for bucket/other equipment. Weight 220 kg. A security hook is mounted on the quickfit fastening. With the bucket disconnected, the lifting capacity is increased.

Full check valve (hose rupture valve)

protection to comply with lifting requirements under the Construction (Lifting Operations) Regulations.

Ripper tooth*

Cable bucket*
Cutting width 650 mm.
Volume CECE 400 l.
Weight 380 kg.

Articulating slope bucket*
powered by the 3rd working pump.
Cutting width 1800 mm.
Volume CECE 800 l.
Weight 900 kg.

Buckets
for different materials.

Equipment for fitting hydraulic hammer, magnet, grab and polygrab.

Equipment for materials handling.

Track plates
800 mm triple bar track plates.

Heavier counterweight
Weight 4000 kg.

Remote control
for improved visibility and security.

Rotating warning lamp.

Tropical equipment.

Depth meter
for measuring digging depth.

- * Adapted for quickfit device.
- ** Adapted for both quickfit device and standard attachment.

Specifications and design are subject to change without notice. Reservation is made for minor deviations of dimensions and weights listed.

Åkerman Printing M93201/06/91 From machine No. 4209

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