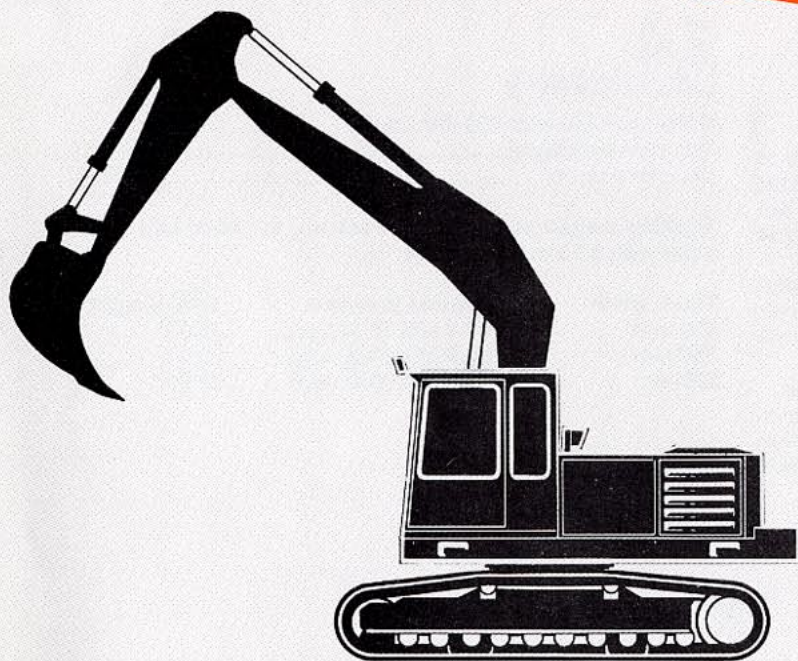
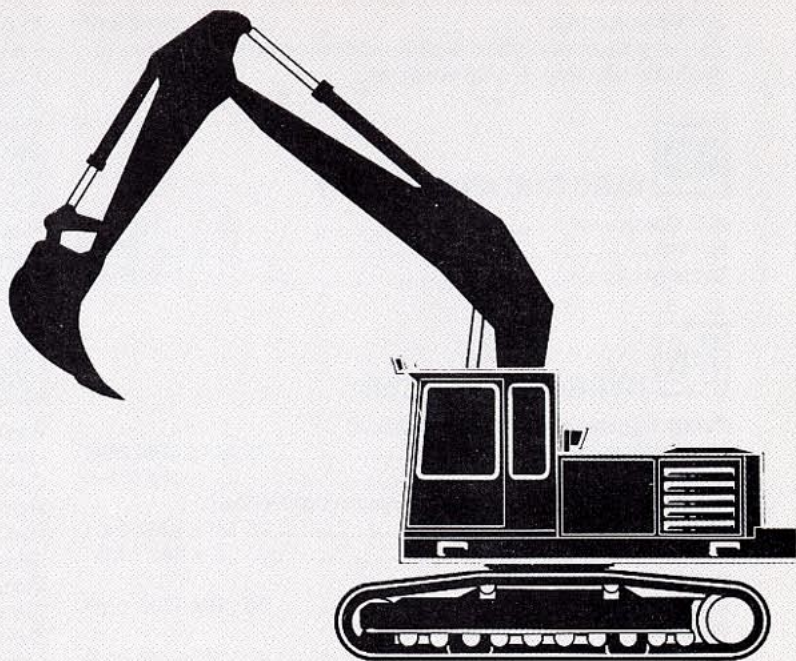


ÅKERMAN H10^BLC

English 13



BASE MACHINE



DIESEL ENGINE

VOLVO TD61 ACE

The TD61ACE is a turbocharged 6-cylinder, 4-stroke diesel engine with water cooling and direct injection.

Output at 2100 rpm122 kW (166 hp)

(According to ISO 3046 and DIN 6271)

Cylinder diameter98.43 mm

Piston stroke120 mm

Stroke volume5.48 dm³

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



ELECTRIC SYSTEM, 24V

A.C. Generator28V/55A

Battery4 pcs. (12V)

Battery capacity2 x 60 Ah



HYDRAULIC SYSTEM

Pump 1 (slew, pressure controlled)

Max. pressure26 MPa (260 bar)

Max. flow88 l/min

Pumps 2 and 3 (power and pressure controlled)

Max. pressure26 MPa (260 bar)

Max. flow2 x 142 l/min

Pumps 2 and 3 with HLD

Max. pressure30 MPa (300 bar)

Servo pump

Pressure6.5 MPa (65 bar)

Flowabout 21 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 speed8 rpm

90° turn from start to stop4.6 s

180° turn from start to stop6.5 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 effort235 kN (24.0 Mp)

Track speed, high speed2.5 km/h

Track speed, low speed1.9 km/h

Tracks

Track chain B 60 - specially reinforced for excavator use.

Number of track plates each side50 pcs.

Track width650 (750 and 900) mm

Rollers each side10 bottom rollers and 2 top rollers



CYLINDER DATA

Boom cylinder

Internal diameter160 mm

Piston rod diameter105 mm

Piston stroke1395 mm

Piston force, out523 kN (53.3 Mp)

Piston force, out with HLD603 kN (61.5 Mp)

Dipper arm cylinder

Internal diameter160 mm

Piston rod diameter105 mm

Piston stroke1175 mm

Piston force, out523 kN (53.3 Mp)

Piston force, out with HLD603 kN (61.5 Mp)

Bucket cylinder

Internal diameter140 mm

Piston rod diameter90 mm

Piston stroke850 mm

Piston force, out400 kN (40.8 Mp)

Piston force, out with HLD462 kN (47.1 Mp)



VOLUMES

Fuel tank340 l

Hydraulically driven fuel pump, capacity90 l/min

Cooling system (incl. glycol)28 l

Hydraulic system, total400 l

Hydraulic oil tank260 l

Diesel engine (lubricating oil)22 l

Pump gearbox2.8 l

Slew gearbox18 l

Slew ring17 l

Travel gearbox2 x 16 l



SOUND LEVEL

Surroundings (10 metres distance from the machine)

Average value L_{pA} (acoustic pressure)77 dB(A)

Average value L_{WA} (acoustic power)105 dB(A)

(According to ISO 6393)

Inside the cab with the door closed

L_{pA} (acoustic pressure)73 dB(A)

(According to ISO 6394)

Approved according to 86/662/EEC



WEIGHTS

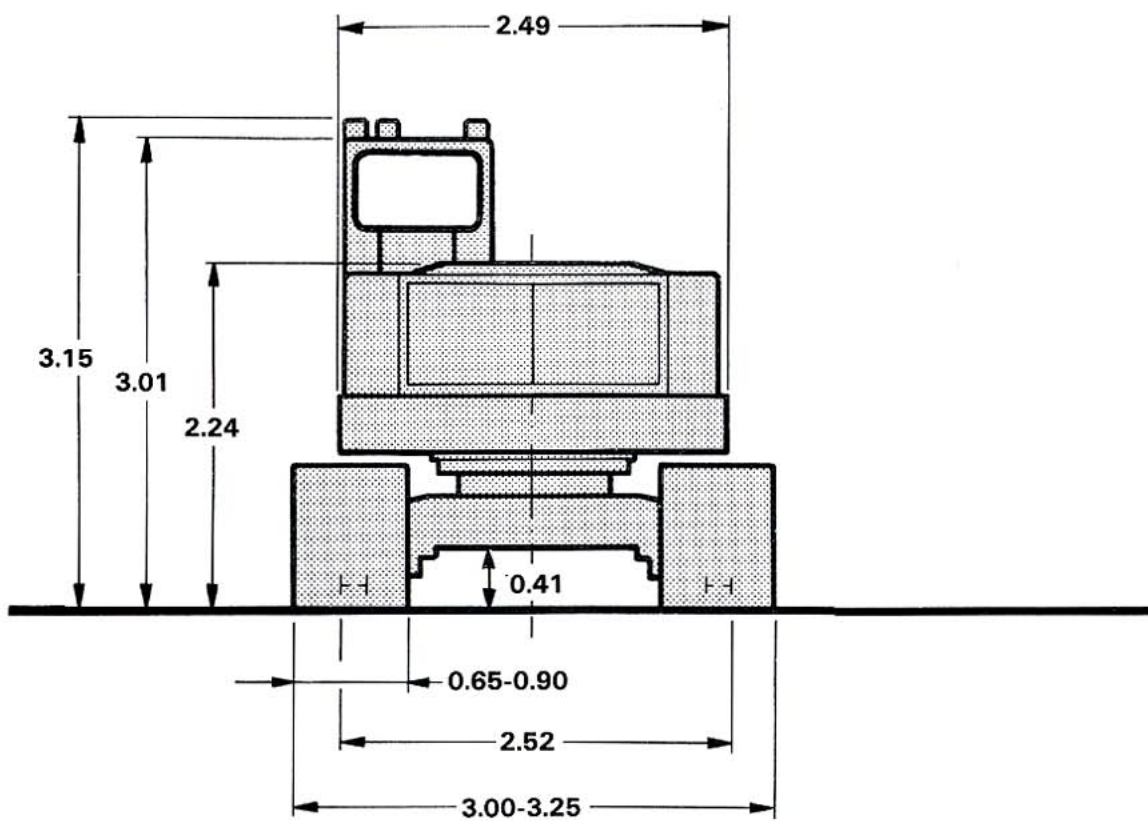
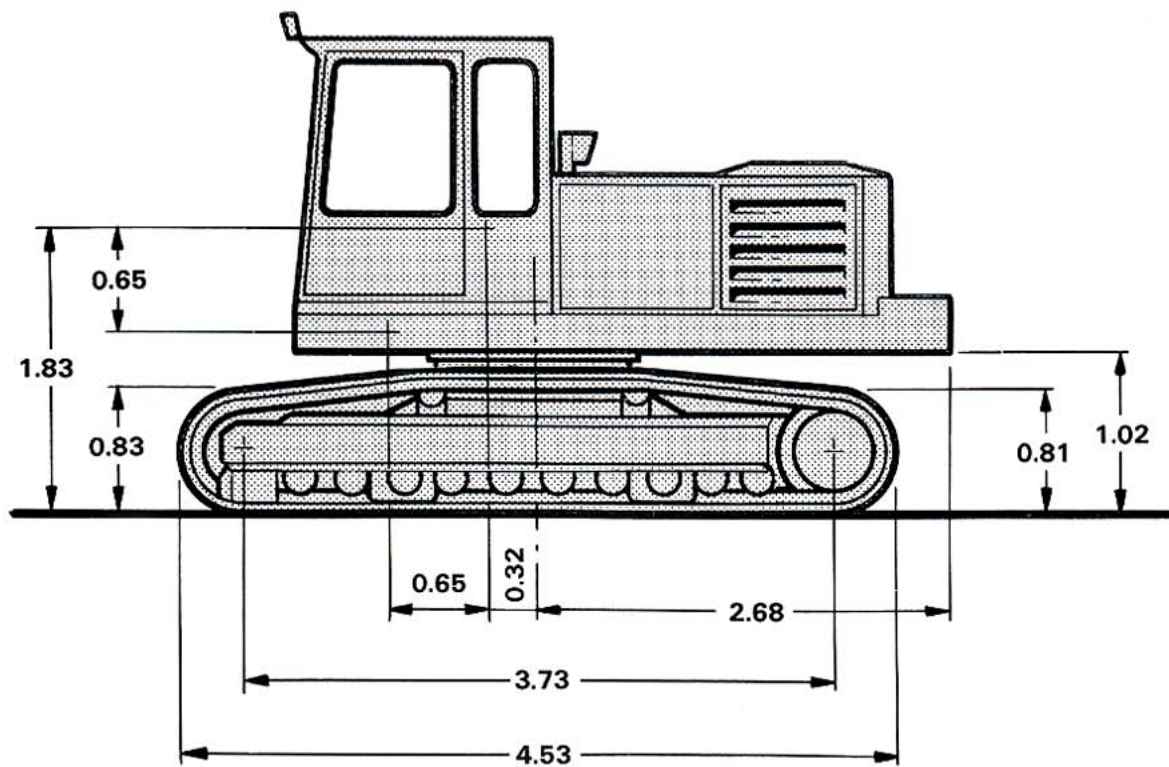
Base machine with 650 mm track,

incl. counterweight18070 kg

Counterweight2600 kg

Working weight and ground pressure, for complete excavator with 2.25 m dipper arm.

Track width	Ground pressure	Total weight
650 mm	41.4 kPa (0.41 bar)	22.0 t
750 mm	36.3 kPa (0.36 bar)	22.3 t
900 mm	31.0 kPa (0.31 bar)	22.8 t



BACKHOE EQUIPMENT

BACKHOE EQUIPMENT

	LENGTH	WEIGHT
Boom incl. dipper cylinder	5.20 m	1570 kg
Dipper arm, compl. incl. bucket cylinder	2.25 m	920 kg
Dipper arm, compl. incl. bucket cylinder	2.80 m	1050 kg
Dipper arm, compl. incl. bucket cylinder	3.30 m	1130 kg

BUCKETS	Capacity		Cutting Width	Weight	Suitable for dippers		
	CECE	SAE			2.25 m	2.80 m	3.30 m
	litres	litres	mm	kg			
HEAVY DUTY/ TRENCHING	515	565	600	545	●	●	●
	700	765	750	605	●	●	●
	700	750	960	600	●	●	●
	765	765	770	665	●	●	●
	800	825	980	630	●	●	●
	800	850	1040	790	●	●	●
	900	900	1050	760	●	●	●
	900	995	900	725	●	●	●
	950	1000	950	800	●	●	
	1000	1000	1130	850	●	●	N.A.
	1000	1000	1050	850	●	●	N.A.
1050	1050	1050	960	●		N.A.	
1150	1150	1050	930	●	N.A.	N.A.	
BULK	1000	1110	1100	810	●	●	●
	1100	1200	1400	860	●	●	●
	1100	1200	1150	870	●	●	●
	1200	1325	1200	870	●	●	
	1200	1325	1500	870	●	●	
	1250	1300	1250	835	●	●	N.A.
	1300	1420	1350	900	●		N.A.
DITCHING	680	805	1800	520	●	●	●
	745	885	2000	550	●	●	●
LOADING/ DITCH CLEANING	830	900	1500	700	●	●	●
	1000	1170	1800	720	●	●	●
CLEANING	1100	1200	2000	760	●	●	●

Clay forks, profile buckets, etc. available to special order.

Most buckets are available with standard or quickfit mountings. 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 2.25 m	Dipper arm 2.80 m	Dipper arm 3.30 m
Digging force at bucket teeth due to bucket cylinder (Bucket at 128° rotation)	140 kN (14.3 Mp)	149 kN (15.2 Mp)	
Digging force at bucket teeth due to bucket cylinder (Bucket at 156° rotation)	121 kN (12.3 Mp)	129 kN (13.2 Mp)	124 kN (12.6 Mp)
Digging force at bucket teeth due to dipper arm cylinder	105 kN (10.7 Mp)	94 kN (9.5 Mp)	86 kN (8.8 Mp)

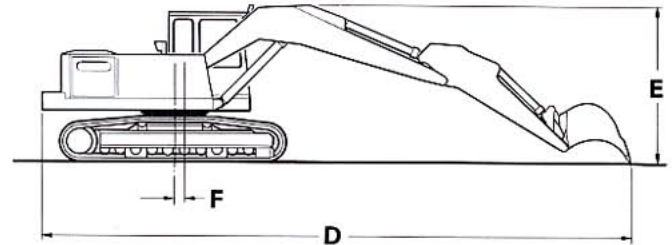
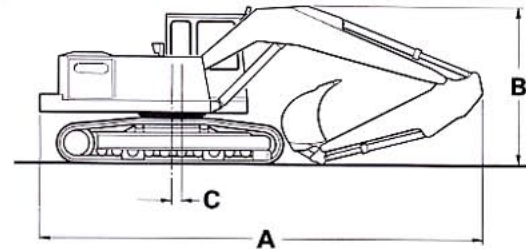
Digging forces are calculated with Åkermans' standard buckets.

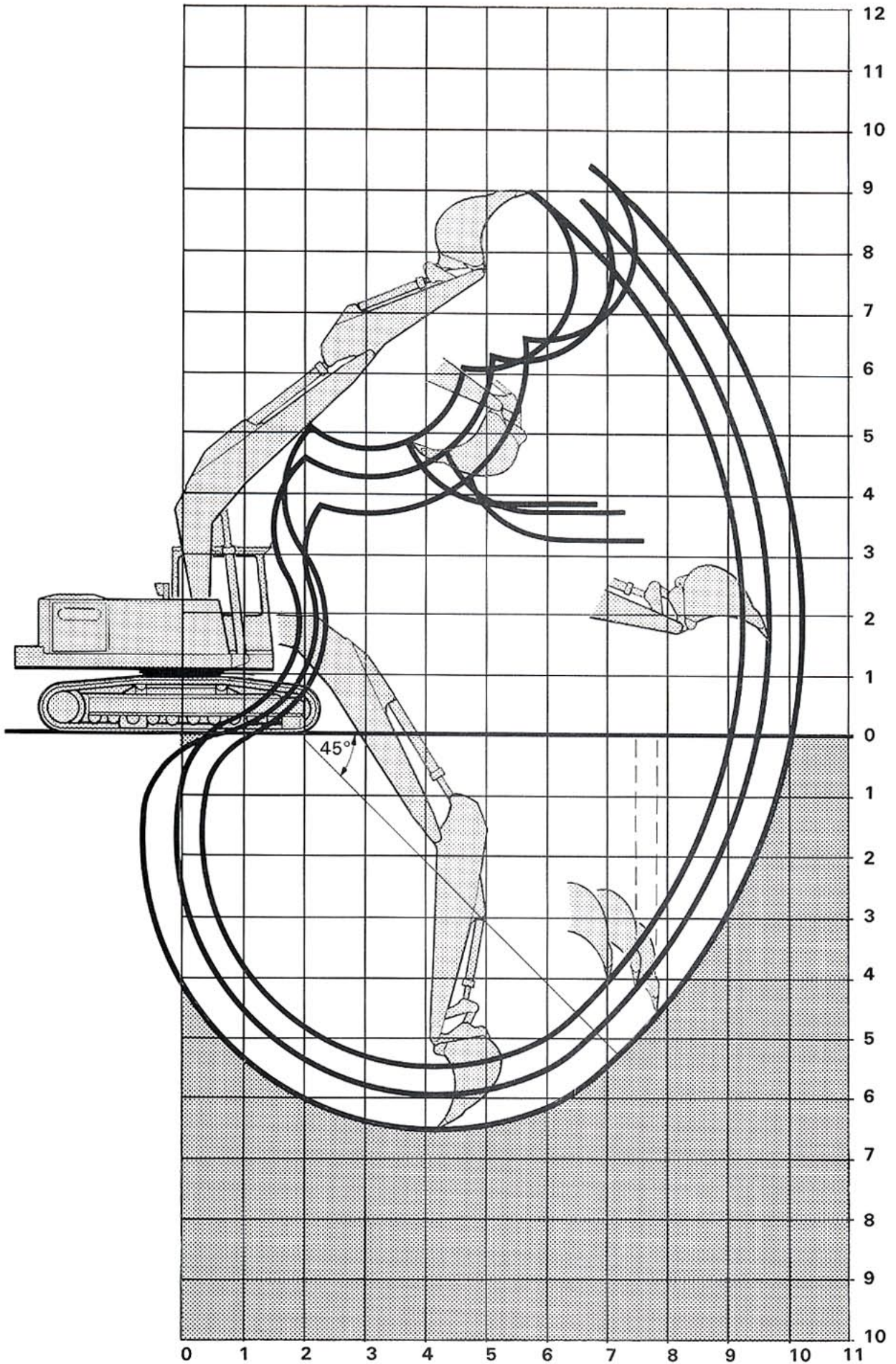
DIGGING DATA

	Dipper arm 2.25 m	Dipper arm 2.80 m	Dipper arm 3.30 m
Max. reach at ground level	9.1 m	9.5 m	10.0 m
Max. digging depth	5.5 m	6.0 m	6.5 m
Max. height, ground - tooth tip	8.9 m	8.8 m	9.3 m
Max. dumping height	6.0 m	6.2 m	6.5 m
Max. practical dumping height	3.8 m	3.7 m	3.2 m
Practical digging depth at a repose of material of 45°	4.6 m	4.9 m	5.3 m
Max. vertical digging depth	4.1 m	4.2 m	4.6 m
Max. reach, slewing centre - bucket attachment	7.7 m	8.2 m	8.7 m
Max. height, ground - bucket attachment	7.6 m	7.7 m	8.0 m
Reach from slewing centre at max. vertical digging depth	7.0 m	7.5 m	7.8 m
Reach, slewing centre - tooth tip at max. height ground - tooth tip	5.8 m	6.5 m	6.7 m
Min. front slewing radius	4.1 m	4.1 m	4.2 m

TRANSPORT DATA

Min. transport length with folded equipment (A)	9.0 m	9.0 m	9.0 m
Min. transport height with folded equipment (B)	3.20 m	3.25 m	3.90 m
Distance slewing centre - centre of gravity, folded equipment (C)	0.2 m	0.2 m	0.2 m
Total length with extended equipment (D)	11.8 m	12.2 m	12.7 m
Min. transport height with extended equipment (E)	3.15 m	3.20 m	3.20 m
Distance slewing centre - centre of gravity, extended equipment (F)	0.5 m	0.5 m	0.5 m





LIFTING CAPACITY

MAX LOAD AT 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 2.25 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									5670*/B= 5.5
6				5370*					5570*/B= 6.4
5				5440*					5460*/B= 6.9
4		7570*	6410*	5780*	5360				5000 /B= 7.3
3		9200*	7270*	6260*	5300				4640 /B= 7.6
2			8110*	6620	5220				4600 /B= 7.6
1		11480*	8680	6500	5150				4570 /B= 7.6
0		11710*	8570	6430	5110				4720 /B= 7.4
-1	11410*	11500*	8530	6400	5110				5020 /B= 7.1
-2	13900*	10880*	8550	6420					5610 /B= 6.6
-3	12250*	9720*	7740*						6160*/B= 5.8
-4									
-5									
-6									

WITH 2.25 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									4750 /B= 5.5
6				4140					3690 /B= 6.4
5				4100					3250 /B= 6.9
4		7490	5300	4010	3140				2920 /B= 7.3
3		7050	5080	3880	3080				2700 /B= 7.6
2			4870	3760	3010				2670 /B= 7.6
1		6460	4710	3660	2950				2630 /B= 7.6
0		6380	4620	3590	2920				2710 /B= 7.4
-1	10310	6360	4590	3570	2920				2870 /B= 7.1
-2	10390	6410	4600	3590					3190 /B= 6.6
-3	10550	6510	4690						3860 /B= 5.8
-4									
-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, in accordance with H. & S. E. guidelines, to prevent gravity fall of the load in the event of hydraulic hose 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 consideration only the **minimum** load which can be lifted at any particular radius should be specified.

LIFTING CAPACITY

MAX LOAD AT 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 2.80 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				4870*					4990*/B = 6.2
6				4670*					4890*/B = 6.9
5				4850*	4810*				4880*/B = 7.4
4			5720*	5240*	4980*				4490 /B = 7.8
3		8150*	6610*	5760*	5270*	4270			4270 /B = 8.0
2		9740*	7520*	6320*	5200	4230			4140 /B = 8.1
1		10870*	8290*	6480	5110	4180			4110 /B = 8.1
0	8510*	11440*	8520	6370	5050				4230 /B = 7.9
-1	12460*	11520*	8440	6310	5020				4470 /B = 7.6
-2	14770*	11170*	8430	6310	5040				4940 /B = 7.1
-3	13420*	10350*	8230*	6360					5680*/B = 6.5
-4	11270*	8790*	6830*						5780*/B = 5.5
-5									
-6									

WITH 2.80 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				4190					3940 /B = 6.2
6				4200					3290 /B = 6.9
5				4140	3200				2900 /B = 7.4
4			5360	4030	3150				2620 /B = 7.8
3		7190	5120	3890	3070	2470			2470 /B = 8.0
2		6760	4880	3750	2990	2430			2380 /B = 8.1
1		6460	4690	3620	2910	2390			2350 /B = 8.1
0	8510*	6300	4560	3530	2850				2410 /B = 7.9
-1	10050	6240	4490	3480	2820				2540 /B = 7.6
-2	10120	6250	4480	3480	2840				2790 /B = 7.1
-3	10260	6320	4530	3530					3200 /B = 6.5
-4	10490	6470	4660						4110 /B = 5.5
-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, in accordance with H. & S. E. guidelines, to prevent gravity fall of the load in the event of hydraulic hose 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 consideration only the **minimum** load which can be lifted at any particular radius should be specified.

LIFTING CAPACITY

MAX LOAD AT 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 3.30 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									4530*/B= 6.8
6					4290*				4490*/B= 7.5
5					4320*	4390			4390 /B= 8.0
4				4690*	4520*	4350			4090 /B= 8.3
3			5860*	5220*	4840*	4280			3890 /B= 8.5
2		8600*	6800*	5800*	5140	4200			3770 /B= 8.6
1		9940*	7640*	6340*	5030	4140			3730 /B= 8.6
0		10770*	8240	6210	4950	4090			3820 /B= 8.4
-1	12110*	11100*	8130	6130	4890	4070			4000 /B= 8.1
-2	14830*	10990*	8090	6090	4880				4300 /B= 7.7
-3	13780*	10440*	8110	6120	4940				4850 /B= 7.1
-4	12070*	9320*	7400*	5760*					5380*/B= 6.2
-5									
-6									

WITH 3.30 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									3460 /B= 6.8
6					3290				2900 /B= 7.5
5					3240	2560			2560 /B= 8.0
4				4030	3160	2530			2370 /B= 8.3
3			5080	3870	3060	2480			2240 /B= 8.5
2		6640	4810	3700	2950	2410			2150 /B= 8.6
1		6290	4590	3560	2860	2350			2120 /B= 8.6
0		6080	4430	3440	2780	2310			2160 /B= 8.4
-1	9540	5980	4330	3370	2730	2290			2260 /B= 8.1
-2	9530	5950	4300	3340	2720				2430 /B= 7.7
-3	9590	5980	4310	3360	2770				2730 /B= 7.1
-4	9710	6080	4400	3460					3330 /B= 6.2
-5									
-6									

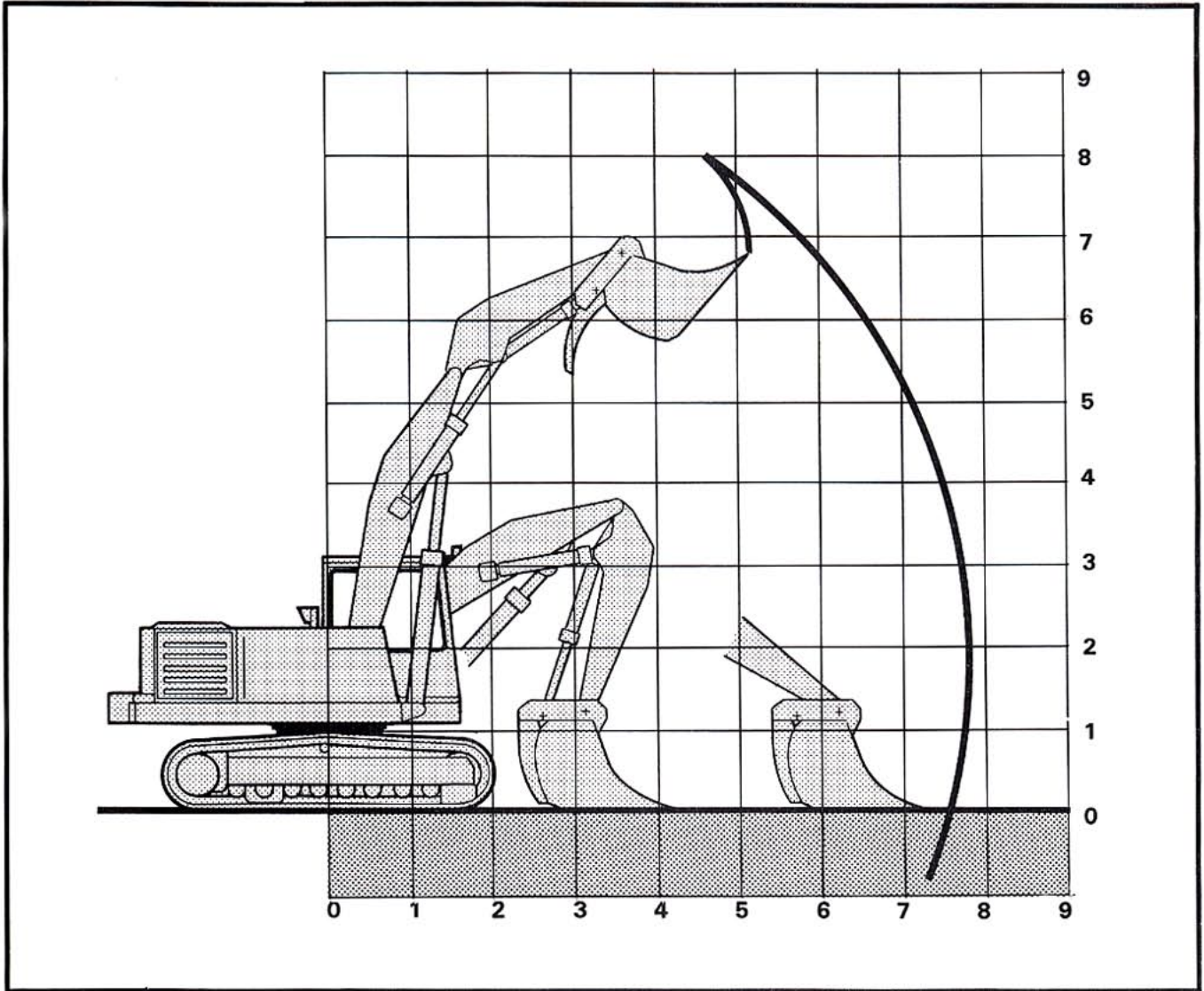
Loads marked with an asterisk (*) are limited by the hydraulic lifting capacity. Other loads limited due to machine stability.

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, in accordance with H. & S. E. guidelines, to prevent gravity fall of the load in the event of hydraulic hose 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 consideration only the **minimum** load which can be lifted at any particular radius should be specified.

LOADING EQUIPMENT



BUCKET

Volume1500 litres CECE
 Weight.....1800 kg
 Cutting width1700 mm
 Bucket tooth.....6 pcs of No. 211465
 (The machine is available with alternative buckets.)

DIGGING FORCE

Digging force at bucket tooth
 due to dipper arm 127 kN
 (12.9 Mp)

Digging force at bucket tooth
 due to dipper arm 98 kN
 (10.0 Mp)

WEIGHTS

Weight complete equipment.....4100 kg
Working weight complete machine.....22.2 t

DIGGING DATA

Max. reach7.7 m
 Max. reach at ground level7.4 m
 Max. digging height6.7 m
 Max. dumping height5.2 m
 Max. level cut with bucket flat on ground.....3.0 m

TRANSPORT DATA

Min. transport length with folded equipment.....6.8 m
 Min. transport height with folded equipment.....3.8 m
 Distance slewing centre - centre of gravity,
 folded equipment0.16 m
 Min. front slewing radius, folded equipment.....3.1 m
 Max. transport length with extended equipment10.0 m
 Min. transport height with extended equipment.....3.15 m
 Distance slewing centre - centre of gravity,
 extended equipment.....0.54 m



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A series of 20 horizontal dotted lines spanning the width of the page, providing a guide for handwriting practice. The lines are evenly spaced and extend from the left margin to the right margin.

EXTRA EQUIPMENT

EXAMPLES OF EXTRA EQUIPMENT AVAILABLE FOR THE ÅKERMAN H10BLC.

Dipper arm 2.80 m.

Dipper arm 3.30 m.

Alternative boom cylinder fastening on the boom increases the lifting height and reduces the front slewing radius. (Cannot be combined with 2.80 m dipper arm.)

Quickfit device for bucket/other equipment. Weight 160 kg.

Jib* hydraulically extendable. Length 4.2-5.4 m.

Ripper tooth*.

Cable bucket*
Cutting width 550 mm.
Volume CECE 280 l.
Weight 385 kg.

Wrist-action slope bucket**
Cutting width 1550 mm.
Volume CECE 400 l.
Weight 575 kg.

Buckets for different materials.

Articulating slope bucket* powered by the 3rd working pump.
Cutting width 1300 mm.
Volume CECE 650 l.
Weight 695 kg.

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

Front shovel equipment.

Fuel miser to reduce fuel costs.

Depth meter for measuring digging depth.

Remote control for improved visibility and security.

Rotating warning lamp.

Tropical equipment.

Electrically heated seat.

Cab air filter.

Circulation pump for cab heater.

Track plates
750 mm triple bar track plates.
900 mm triple bar track plates.

Equipment for materials handling.

Full check valve (hose rupture valve) protection to comply with lifting requirements under the Construction (Lifting operations) Regulations.

* 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 M91801/06/91 From machine No. 3853

VME Excavators AB
Box 115, S-241 22 ESLÖV