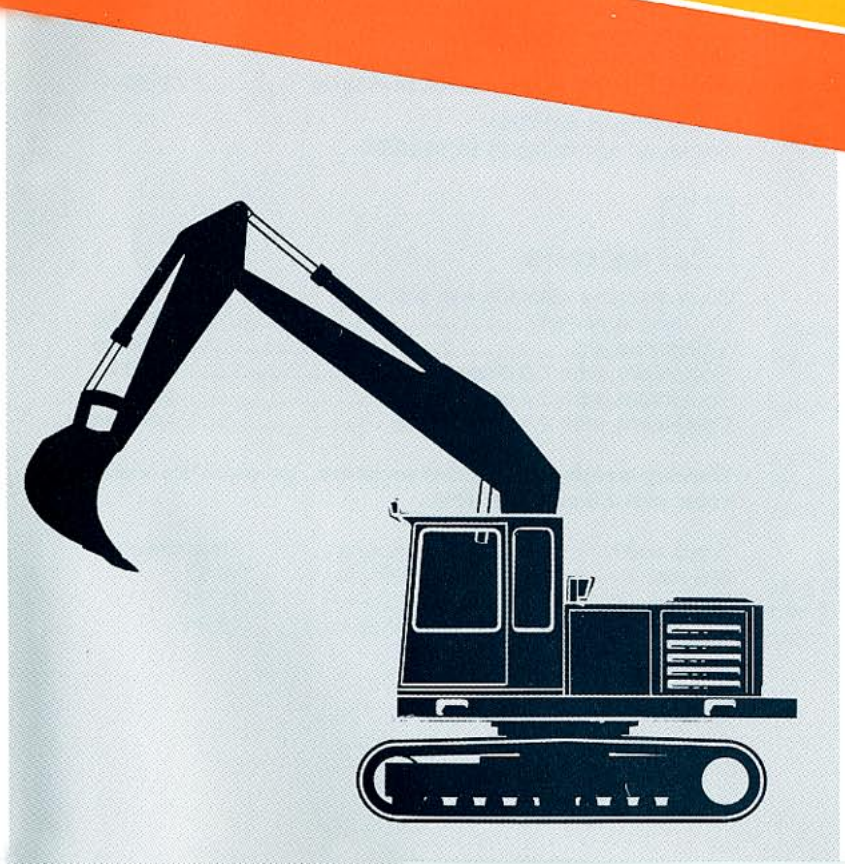
ÅKERMAN H7C

International 13



BASE MACHINE

DIESEL ENGINE

VOLVO TD 61 ACE
The TD 61 ACE is a turbocharged 6-cylinder, 4-stroke diesel engine with water cooling and direct injection.
Output at 1800 rpm.....107 kW (145 Hp)
(According to ISO 3046 and DIN 6271)
Cylinder diameter .....98.43 mm
Piston stroke .....120 mm
Stroke volume.....5.48 dm^3
The engine is equipped with an electric starter element to facilitate starting in cold weather.

ELECTRIC SYSTEM, 24V

A.C.Generator 28 V/55A
Battery.....4 pcs. (12V)
Battery capacity.....2 x 60 Ah

HYDRAULIC SYSTEM

Pump 1 (slew, pressure controlled)
Max. pressure .....28 MPa (280 bar)
Max. flow.....64 l/min
Pumps 2 and 3 (power and pressure controlled)
Max. pressure .....25 MPa (250 bar)
Max. flow.....2 x 114 l/min
Pumps 2 and 3 with HLD
Max. pressure .....29 MPa (290 bar)
Servo pump
Pressure.....6.5 MPa (65 bar)
Flow .....approx. 18 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 .....7.9 rpm
90° turn, from start to stop .....4.4 s
180° turn, from start to stop .....6.3 s
(Bucket empty - equipment extended)

UNDERCARRIAGE

Running
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.....151 kN (15.4 Mp)
Track speed, high speed.....2.9 km/h
Track speed, low speed .....2.3 km/h
Tracks
Track chain B4 - specially reinforced for excavator use.
Number of track plates each side .....49 pcs.
Track width .....600 (750 and 900) mm
Rollers each side .....9 bottom rollers and 1 top roller

CYLINDER DATA

Boom cylinder
Internal diameter .....150 mm
Piston rod diameter .....105 mm
Piston stroke .....1225 mm
Piston force, out.....442 kN (45.0 Mp)
Piston force, out with HLD .....512 kN (52.2 Mp)
Dipper arm cylinder
Internal diameter .....140 mm
Piston rod diameter .....90 mm
Piston stroke .....1100 mm
Piston force, out.....385 kN (39.2 Mp)
Piston force, out with HLD .....446 kN (45.5 Mp)
Bucket cylinder
Internal diameter .....125 mm
Piston rod diameter .....80 mm
Piston stroke .....850 mm
Piston force, out.....307 kN (31.3 Mp)
Piston force, out with HLD .....356 kN (36.3 Mp)

VOLUMES

Fuel tank.....290 l
Hydraulically driven fuel pump, capacity.....approx.90 l/min
Cooling system (incl. glycol).....28 l
Hydraulic system, total .....320 l
Hydraulic oil tank .....220 l
Diesel engine (lubricating oil).....22 l
Pump gearbox .....3.1 l
Slew gearbox .....16.5 l
Slew ring .....20 l
Travel gearbox .....2 x 14 l

SOUND LEVEL

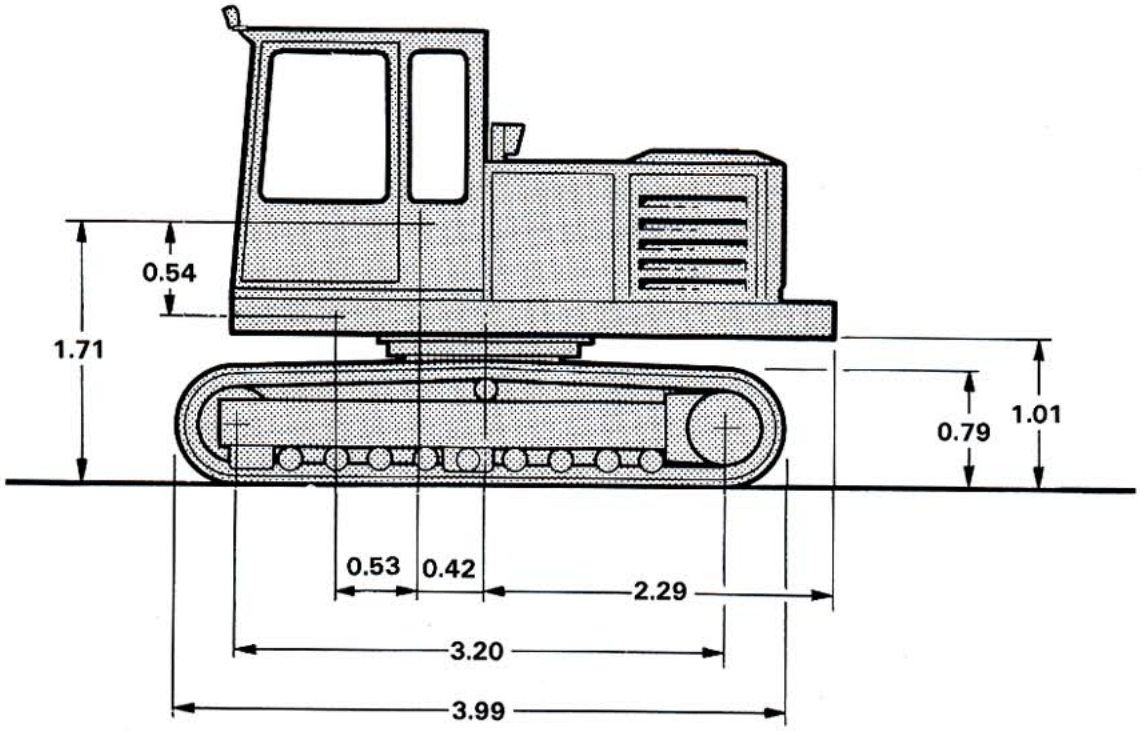
Surroundings (10 metres distance from the machine)
Average value L_{pA} (acoustic pressure).....75 dB(A)
Average value L_{WA} (acoustic power).....103 dB(A)
(According to ISO 6393)
Inside the cab with the door closed
Average value L_{pA} (acoustic pressure).....73 dB(A)
(According to ISO 6394)
Approved according to 86/662/EEC

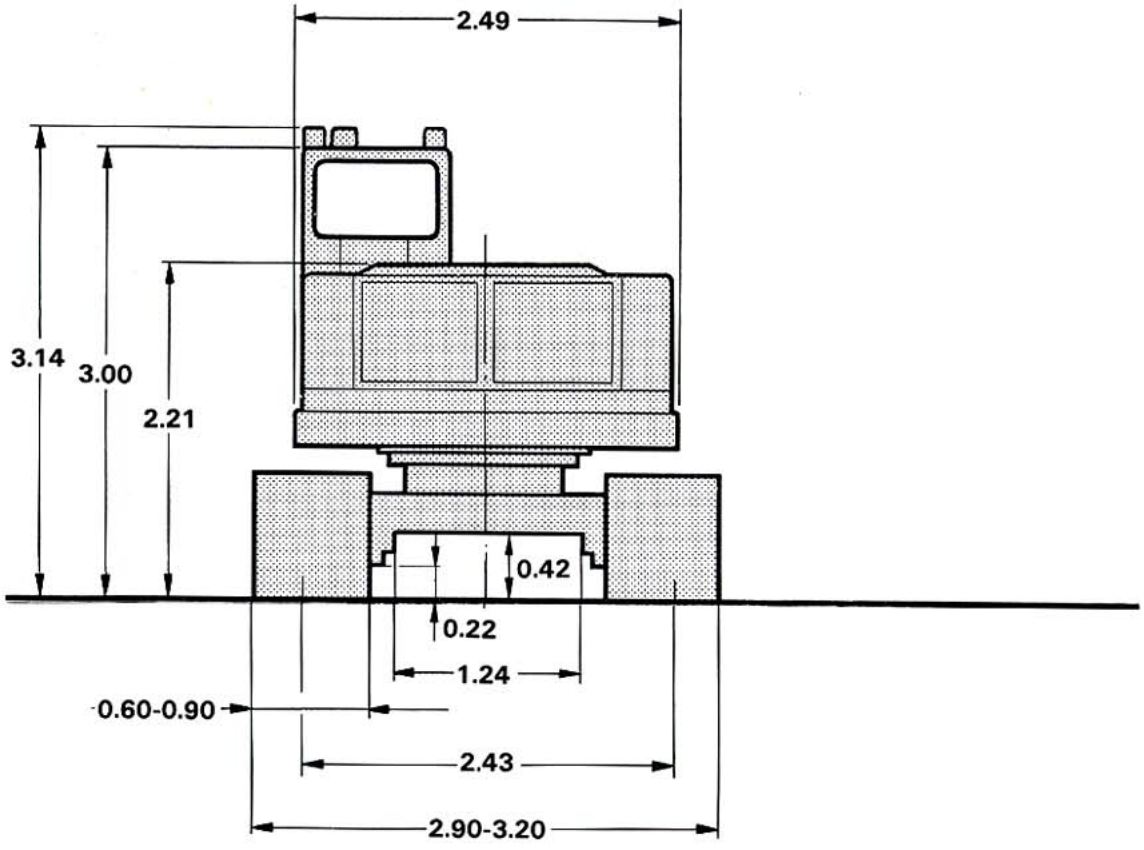
WEIGHTS

Base machine with 600 mm track,
incl. counterweight .....13340 kg
Counterweight .....1050 kg
Equipment, with 2.0 dipper arm .....2560 kg
Equipment, with 2.4 dipper arm .....2650 kg
Equipment, with 2.8 dipper arm .....2665 kg

Working weight and ground pressure, for complete excavator with 2.0 m dipper arm.

Track width	Ground pressure	Total weight
600 mm	39 kPa (0.39 bar)	16.6 t
750 mm	32 4Pa (0.32 bar)	17.2 t
900 mm	27.6 kPa (0.28 bar)	17.6 t


0.54
1.71
0.79
1.01
0.53
0.42
2.29
3.20
3.99


2.49
3.14
3.00
2.21
0.42
0.22
1.24
0.60-0.90
2.43
2.90-3.20

BACKHOE EQUIPMENT

BACKHOE EQUIPMENT

Boom length ..... **4.65 m**

Data for 2.0 m dipper arm

HD-bucket 700 litres CECE = 725 litres SAE J296

Weight ..... 540 kg

Cutting width ..... 990 mm

Data for 2.4 m dipper arm

HD-bucket 700 litres CECE = 725 litres SAE J296

Weight ..... 540 kg

Cutting width ..... 990 mm

Data for 2.8 m dipper arm

HD-bucket 600 litres CECE = 625 litres SAE J296

Weight ..... 480 kg

Cutting width ..... 930 mm

DIGGING FORCE

	Dipper arm 2.0 m	Dipper arm 2.4 m	Dipper arm 2.8 m
Digging force at bucket tooth due to bucket cylinder at 160° torsional angle of the bucket	106 kN (10.8 Mp)	106 kN (10.8 Mp)	111 kN (11.3 Mp)
Digging force at bucket tooth due to dipper arm cylinder	84 kN (8.6 Mp)	75 kN (7.7 Mp)	69 kN (7.0 Mp)

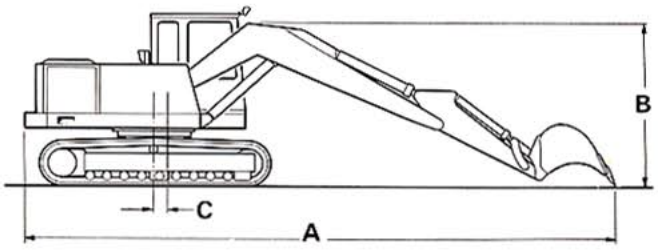
Digging forces are calculated with Åkermans' standard buckets.

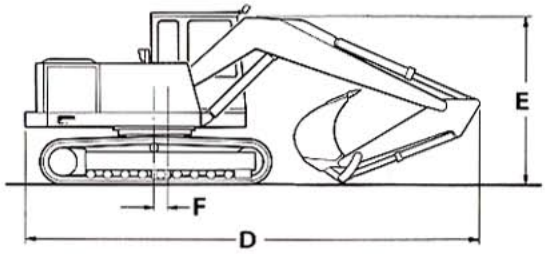
DIGGING DATA

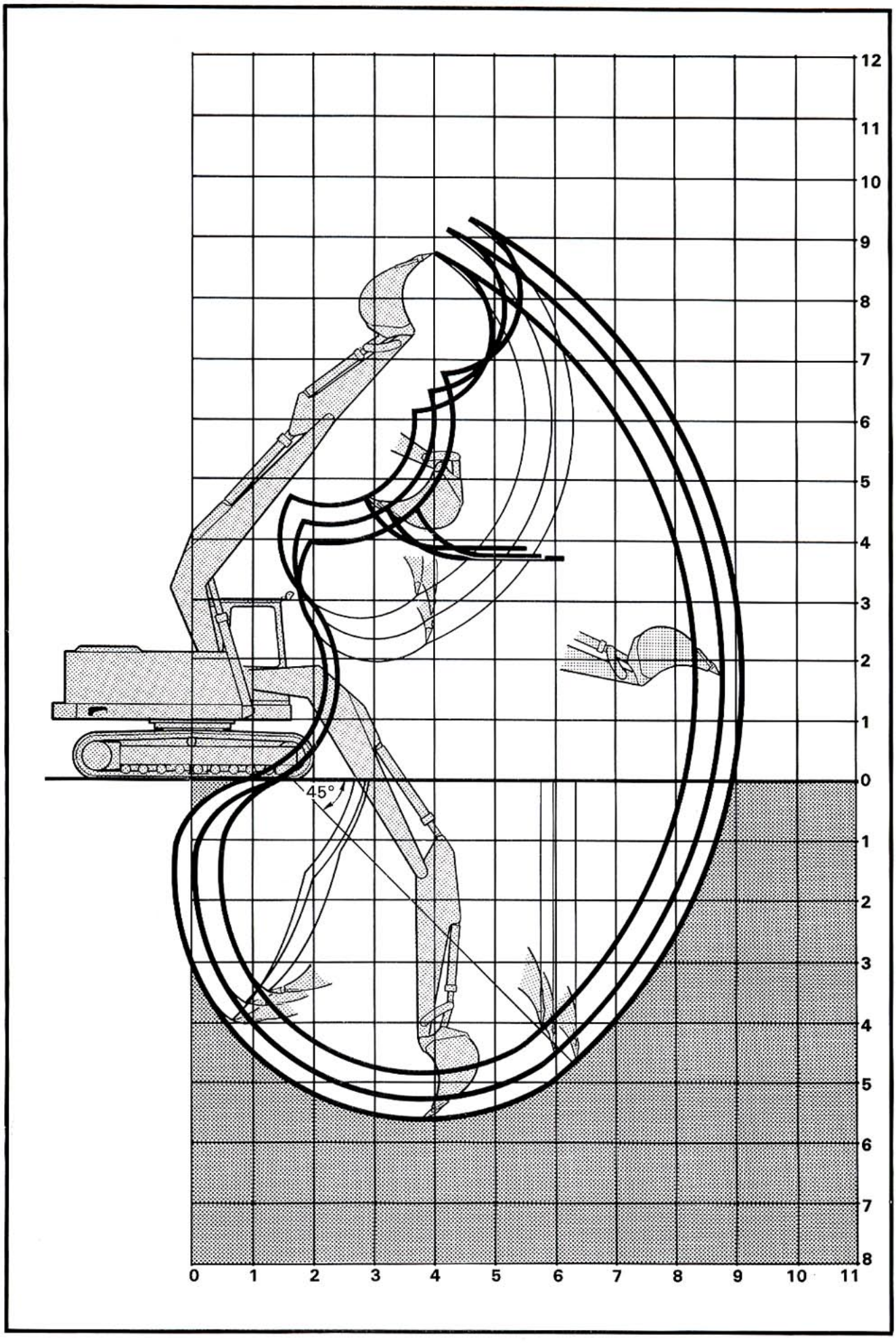
	Dipper arm 2.0 m	Dipper arm 2.4 m	Dipper arm 2.8 m
Max. reach at ground level	8.1 m	8.6 m	8.9 m
Max. digging depth	4.8 m	5.2 m	5.6 m
Max. height, ground - tooth tip	8.7 m	9.3 m	9.1 m
Max. dumping height	6.1 m	6.5 m	6.8 m
Max. practical dumping height	3.9 m	3.7 m	3.7 m
Practical digging depth at a repose of material of 45°	4.1 m	4.4 m	4.7 m
Max. vertical digging depth	4.1 m	4.4 m	4.6 m
Max. reach, slewing centre - bucket attachment	7.0 m	7.4 m	7.8 m
Max. height, ground - bucket attachment	7.5 m	7.8 m	8.1 m
Min. slewing radius in front	3.1 m	3.4 m	3.4 m

TRANSPORT DATA

Min. transport length with folded equipment (A)	8.1 m	8.1 m	8.0 m
Min. transport height with folded equipment (B)	3.1 m	3.2 m	3.4 m
Centre of gravity in front of slewing centre, folded equipment (C)	0.24 m	0.25 m	0.25 m
Total length with extended equipment (D)	10.4 m	10.9 m	11.2 m
Min. transport height with extended equipment (E)	2.9 m	2.9 m	3.0 m
Centre of gravity in front of slewing centre, extended equipment (F)	0.41 m	0.46 m	0.48 m







H7C

LIFTING CAPACITY

MAX LOAD IN BUCKET HOOK (kg) = 80% OF THE TIPPING LOAD
A = Height of bucket attachment (m) B = Reach of load from centre (m)

WITH 2.0 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			3020*						
6				3030*					3150 /B= 6.2
5			2910*	2980*					3100 /B= 6.9
4		4060*	3520*	3270*	3000				2690 /B= 7.4
3			4390*	3730*	2950				2470 /B= 7.7
2			5010	3720	2880				2380 /B= 7.8
1			4850	3620	2820				2400 /B= 7.7
0			4780	3560	2780				2440 /B= 7.6
-1		7020	4760	3530	2770				2660 /B= 7.2
-2	9390*	5540*	4780	3560					3070 /B= 6.6
-3		6260*	4870						
-4									
-5									
-6									

WITH 2.0 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			3020*						
6				2640					2460 /B= 6.2
5			2910*	2640					1980 /B= 6.9
4		4060*	3520*	2560	1910				1690 /B= 7.4
3			3330	2450	1860				1520 /B= 7.7
2			3130	2340	1790				1460 /B= 7.8
1			2990	2250	1740				1460 /B= 7.7
0			2920	2190	1700				1480 /B= 7.6
-1		4190	2900	2170	1690				1620 /B= 7.2
-2	7090	4250	2930	2190					1890 /B= 6.6
-3		4340	3000						
-4									
-5									
-6									

Loads marked with an asterisk (*) are limited by the lifting capacity of the hydraulic system. Other loads limited due to machine stability.
Working pressure with HLD = 29 MPa (290 bar).

LIFTING CAPACITY

MAX LOAD IN BUCKET HOOK (kg) = 80% OF THE TIPPING LOAD
A = Height of bucket attachment (m) B = Reach of load from centre (m)

WITH 2.4 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									
6				2550*					
5				2610*	2780*				2800 /B= 7.3
4			3070*	2930*	2890*				2430 /B= 7.8
3			3940*	3410*	2940	2290			2290 /B= 8.0
2			4870*	3720	2860	2260			2150 /B= 8.2
1			4840	3600	2790	2220			2170 /B= 8.1
0		6940	4730	3520	2740	2200			2200 /B= 8.0
-1	10650*	6330*	4690	3480	2710				2390 /B= 7.6
-2	8340*	5840*	4700	3480	2740				2680 /B= 7.1
-3	6060*	6740*	4760	3540					
-4									

WITH 2.4 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									
6				2550*					
5				2610*	1940				1760 /B= 7.3
4			3070*	2580	1910				1500 /B= 7.8
3			3370	2460	1850	1390			1390 /B= 8.0
2			3150	2330	1770	1360			1290 /B= 8.2
1			2980	2220	1710	1330			1290 /B= 8.1
0		4110	2880	2150	1660	1310			1310 /B= 8.0
-1	6820	4100	2840	2110	1630				1430 /B= 7.6
-2	6920	4140	2850	2110	1650				1620 /B= 7.1
-3	6060*	4220	2900	2170					
-4									

WITH 2.8 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				2460*					
6				2210*	2580*				2320 /B= 7.2
5				2320*	2500*				2250 /B= 7.8
4				2650*	2650*	2370			2240 /B= 8.2
3		4280*	3520*	3140*	2930*	2330			2120 /B= 8.4
2			4480*	3700*	2900	2280			2040 /B= 8.5
1			4880	3630	2810	2240			2010 /B= 8.5
0		6170*	4740	3530	2750	2200			2070 /B= 8.3
-1	9890*	6050*	4670	3470	2710	2190			2190 /B= 8.0
-2	7890*	5640*	4660	3450	2710				2440 /B= 7.5
-3	6340*	6960	4700	3490					
-4		5930*	4640*						

WITH 2.8 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				2460*					
6				2210*	2000				1860 /B= 7.2
5				2320*	2000				1560 /B= 7.8
4				2640	1960	1460			1370 /B= 8.2
3		4280*	3450	2510	1890	1430			1280 /B= 8.4
2			3210	2370	1800	1390			1210 /B= 8.5
1			3010	2250	1720	1340			1180 /B= 8.5
0		4090	2880	2150	1660	1310			1220 /B= 8.3
-1	6690	4050	2820	2100	1630	1300			1300 /B= 8.0
-2	6770	4060	2810	2090	1620				1460 /B= 7.5
-3	6340*	4130	2840	2120					
-4		4260	2950						

Loads marked with an asterisk (*) are limited by the lifting capacity of the hydraulic system.
Other loads limited due to machine stability.
Working pressure with HLD = 29 MPa (290 bar).

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

Åkerman Printing M92521/05/91 From machine No. 1921 - up

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