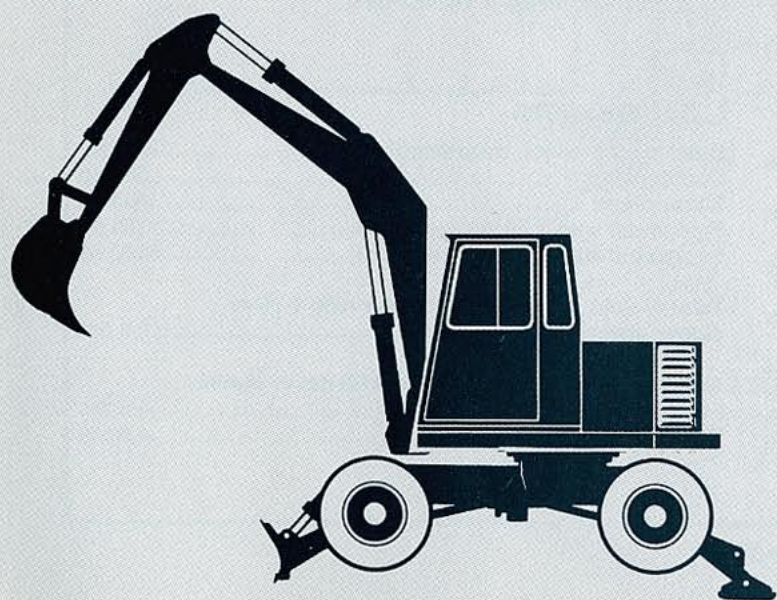
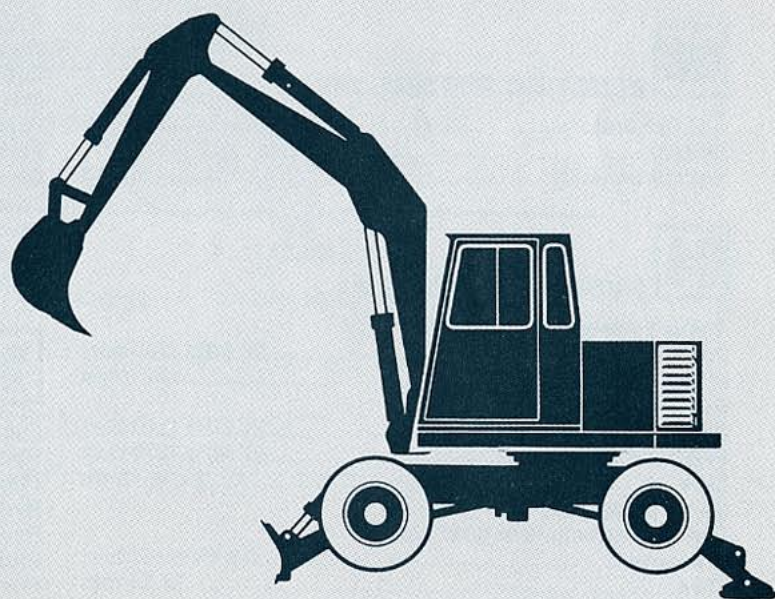


AKERMAN H3MB

International 11



BASE MACHINE



DIESEL ENGINE

VOLVO TD31ACE

The TD31ACE is a turbocharged 4-cylinder, 4-stroke diesel engine with water cooling and direct injection.

Output at 2600 rpm 49 kW (67 hp)

(According to ISO 3046 and DIN 6271)

Cylinder diameter 92 mm

Piston stroke 90 mm

Stroke volume 2.4 dm³



ELECTRIC SYSTEM, 24V

A.C. Generator 28V/45A

Battery 2 pcs. (12V)

Battery capacity 60 Ah



HYDRAULIC SYSTEM

Pump 1 (slew, boom movement)

Pressure 26 MPa (260 bar)

Flow 32 l/min

Pumps 2 and 3

Pressure, digging 21 MPa (210 bar)

Pressure, travel 27 MPa (270 bar)

Flow 2 x 45 l/min

Servo pump (PS)

The servo pump is of gear type.

Pressure 6.5 MPa (65 bar)

Flow 12.3 l/min

Steering pump (PST)

The steering pump is of vane type.

Pressure 9.0 MPa (90 bar)

Flow 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 7.2 rpm

90° turn from start to stop 3 s

180° turn from start to stop 5 s

(Bucket empty - equipment extended)



UNDERCARRIAGE

Travel

A hydraulically variable piston motor operates both drive shafts (4 wheel drive) via a two-steps gearbox.

The drive shafts have hub reduction and are provided with drum brakes

The parking brake is of drum type and is activated by spring power and hydraulically released.

Two separately controlled outriggers are hydraulically locked.

Twin wheels 9.00 - 20PR14

Travel speed, road travel 0 - 30 km/h

Travel speed, site travel 0 - 9 km/h

Max. tractive force, site travel 62 kN (6.3 Mp)



CYLINDER DATA

Boom cylinder

Internal diameter 125 mm

Piston rod diameter 70 mm

Piston stroke 700 mm

Piston force, out 258 kN (26.3 Mp)

Dipper arm cylinder

Internal diameter 110 mm

Piston rod diameter 70 mm

Piston stroke 690 mm

Piston force, out 200 kN (20.3 Mp)

Bucket cylinder

Internal diameter 100 mm

Piston rod diameter 63 mm

Piston stroke 650 mm

Piston force, out 165 kN (16.8 Mp)

Slewing cylinder

Internal diameter 110 mm

Piston rod diameter 63 mm

Piston stroke 334 mm

Piston force, out 247 kN (25.2 Mp)



VOLUMES

Fuel tank 150 l

Hydraulically driven fuel pump, capacity approx. 60 l/min

Cooling system (incl. glycol) 23 l

Hydraulic system, total 160 l

Hydraulic oil tank 110 l

Diesel engine (lubricating oil) 10 l

Pump gearbox 2 l

Slew gearbox 7 l

Travel gearbox 4.3 l

Front and rear axle 2 x 10 l

Hub gear 4 x 1.5 l



SOUND LEVEL

Surroundings (10 metres distance from the machine)

Average value L_{pA} (acoustic pressure) 74 dB(A)

Average value L_{WA} (acoustic power) 102 dB(A)

(According to ISO 6393)

Inside the cab with the door closed

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

(ISO 6394)

Approved according to 86/662/EEC



WEIGHTS

Base machine incl. counterweight 7975 kg

Counterweight 350 kg

Dozer blade 400 kg

Equipment with 1.75 m dipper arm 1125 kg

Equipment with 2.30 m dipper arm 1180 kg

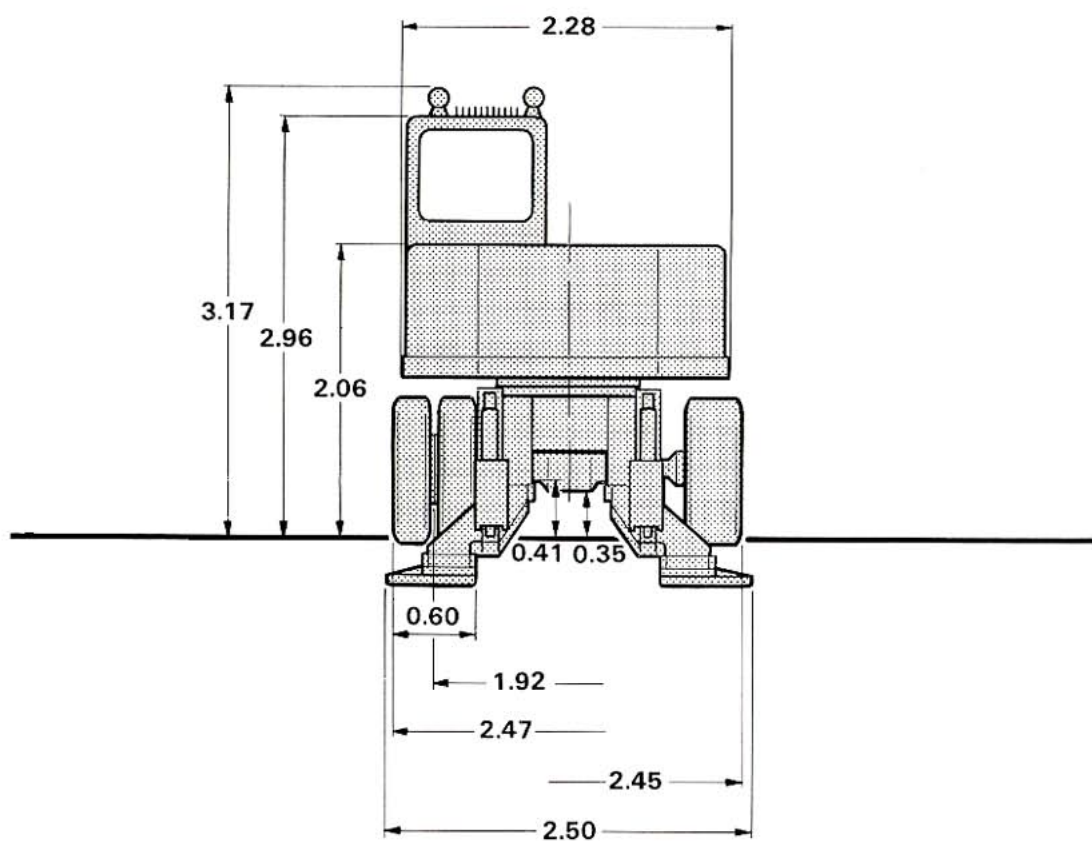
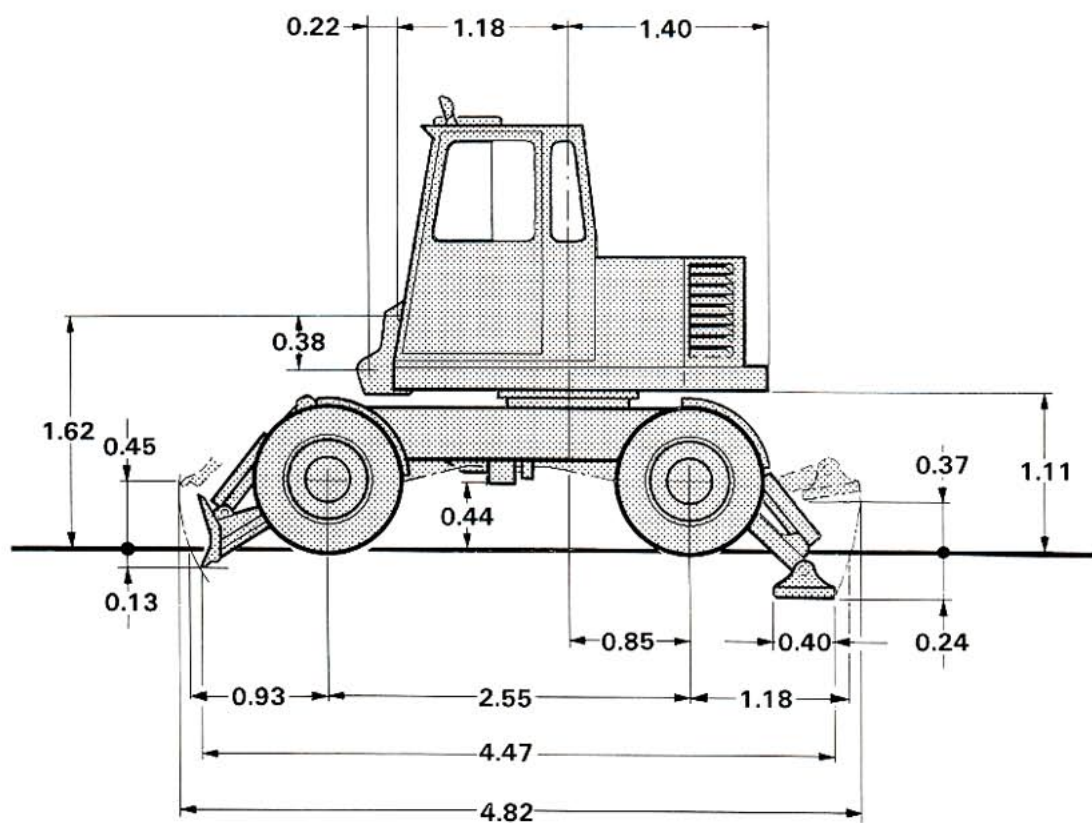
Total weight, complete excavator with 1.75 m

dipper arm and dozer blade 9.1 ton

Axle load, complete excavator with dozer blade:

Front axle 4.6 ton

Rear axle 4.5 ton



BACKHOE EQUIPMENT

BACKHOE EQUIPMENT

Boom length3.30 m

Data for short dipper arm - 1.75 m

HD-bucket 325 litres CECE = 350 litres SAE J296

Weight.....225 kg

Cutting width800 mm

Weight incl. quickfit265 kg

Data for long dipper arm - 2.30 m

HD-bucket 275 litres CECE = 290 litres SAE J296

Weight.....220 kg

Cutting width750 mm

Weight incl. quickfit260 kg

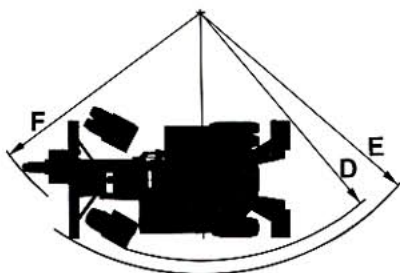
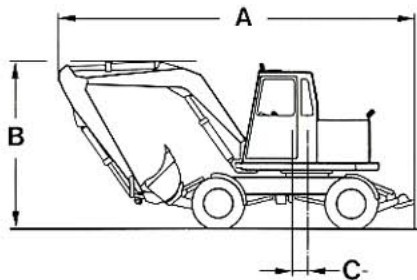
DIGGING FORCE

	Dipper arm 1.75 m	Dipper arm 2.30 m
Digging force in bucket tooth due to bucket cylinder at 180° torsional angle of the bucket	45 kN (4.6 Mp)	48 kN (4.9 Mp)

Digging force in bucket tooth due to dipper arm cylinder	28 kN (2.8 Mp)	32 kN (3.3 Mp)
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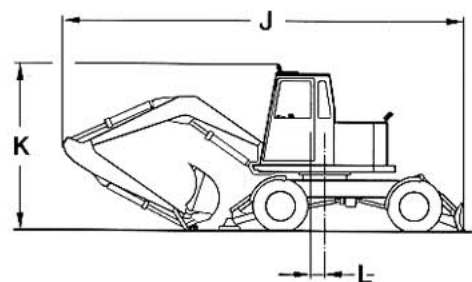
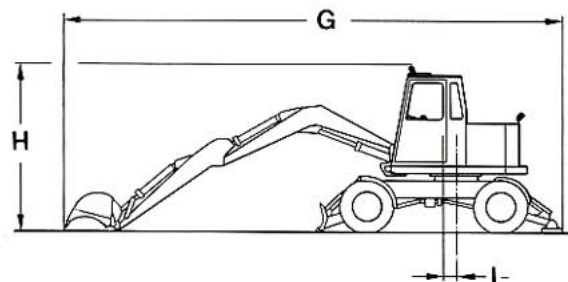
DIGGING DATA

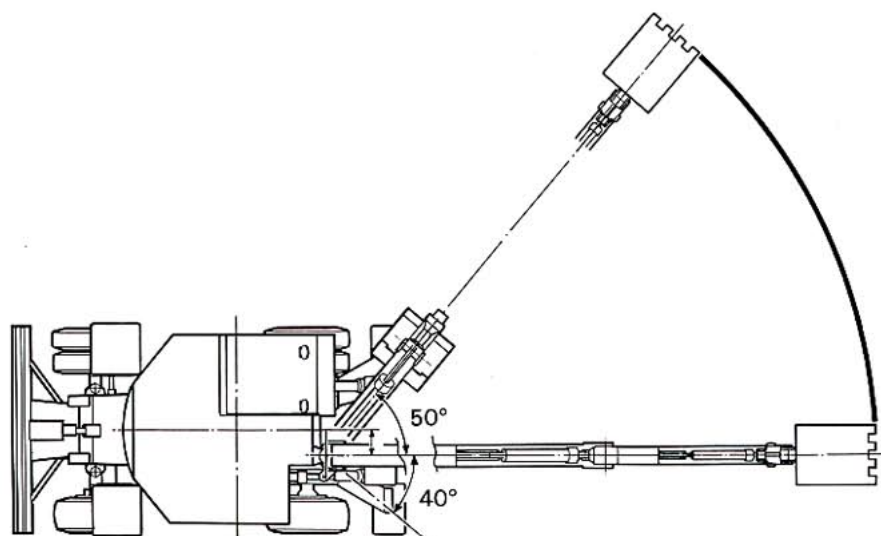
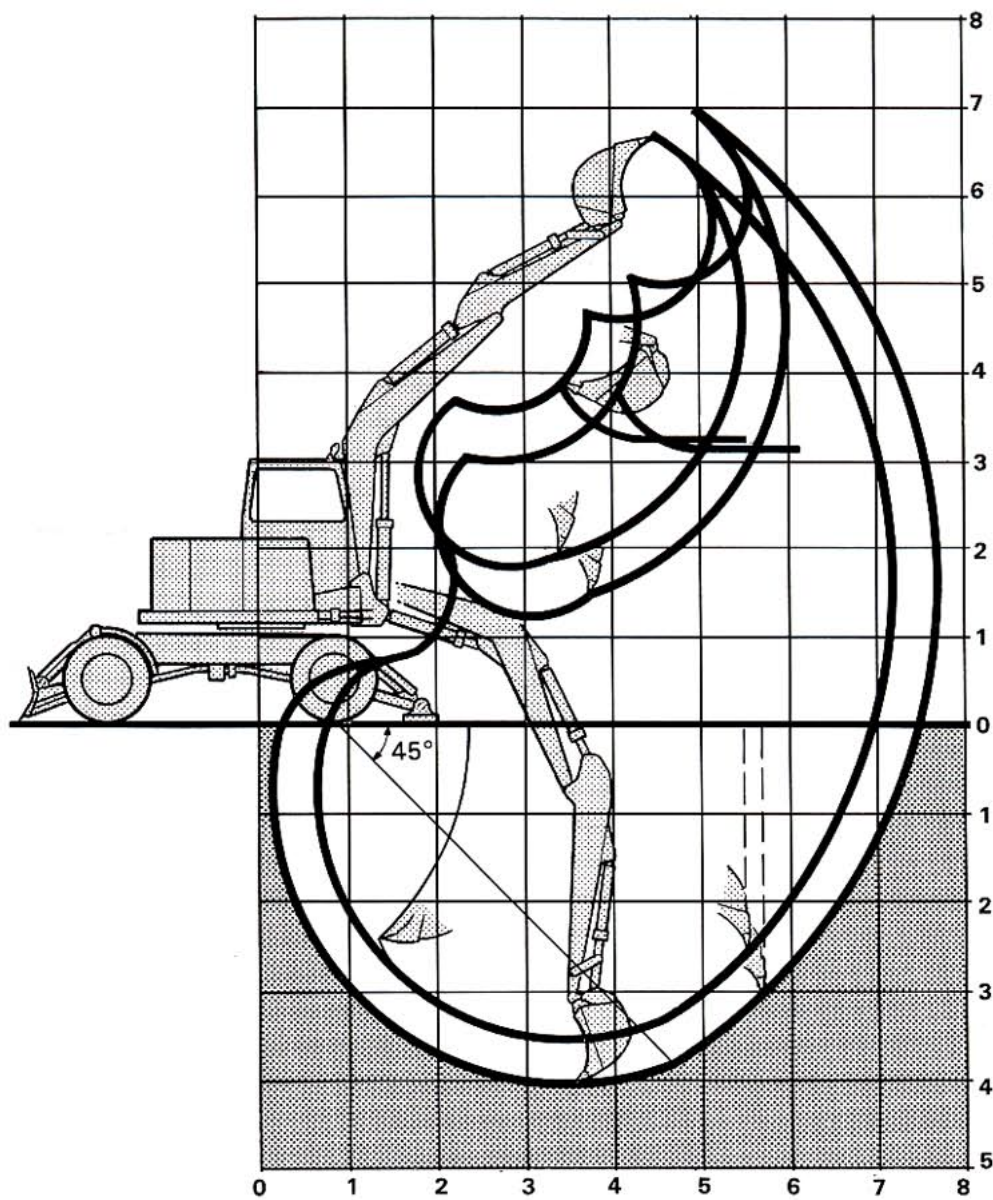
	Dipper arm 1.75 m	Dipper arm 2.30 m
Max. reach at ground level	7.0 m	7.4 m
Reach at ground level with the boom turned 50° to the left.....	6.3 m	6.9 m
Max. height, ground - tooth tip	6.6 m	6.8 m
Max. practical dumping height.....	3.2 m	3.1 m
Practical digging depth at a repose angle of material of 45°	3.5 m	3.8 m
Max. vertical digging depth.....	2.6 m	3.0 m



TRANSPORT DATA

	Dipper arm 1.75 m	Dipper arm 2.30 m
Min. transport length with folded equipment resting on dozer blade (A)	7.0 m	6.8 m
Min. transport height with folded equipment resting on dozer blade (B)	3.2 m	3.2 m
Distance slewing centre - centre of gravity (folded equipment resting on dozer blade) (C).....	0.44 m	0.45 m
Turning radius (D)	6.5 m	6.5 m
Turning radius, incl. dozer blade (E).....	6.9 m	6.9 m
Clearance radius (F).....	7.4 m	
Total length with extended equipment (G)	9.0 m	9.5 m
Min. transport height with extended equipment (H)	3.2 m	3.2 m
Distance slewing centre - centre of gravity (extended equipment) (I).....	0.65 m	0.70 m
Min. transport length with folded equipment at ground level (J)	7.5 m	7.8 m
Min. transport height with folded equipment at ground level (K).....	3.2 m	3.2 m
Distance slewing centre - centre of gravity (folded equipment at ground level) (L).....	0.19 m	0.21 m





LIFTING CAPACITY

MAX LOAD IN BUCKET LINK (kg) = 80% OF THE TIPPING LOAD

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

WITH 1.75 m DIPPER ARM ALONG UNDERCARRIAGE SUPPORT UP

B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5					1110*				1130*/B = 5.1
4					1070*	1030			930/B = 5.8
3			1450*	1340*	1190	1010	860		780/B = 6.3
2			1610	1340	1140	970	840		740/B = 6.4
1		1850	1520	1280	1090	940	810		730/B = 6.4
0	2340	1830	1490	1250	1060	920	800		760/B = 6.2
-1	2370	1840	1490	1250	1060	920			870/B = 5.7
-2	2410	1880	1530	1280					1130/B = 4.9
-3									
-4									

WITH 1.75 m DIPPER ARM ACROSS UNDERCARRIAGE SUPPORT UP

B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5					1110*				1120/B = 5.1
4					1070*	970			870/B = 5.8
3			1450*	1340*	1120	940	800		720/B = 6.3
2			1540	1270	1070	900	770		680/B = 6.4
1		1780	1450	1210	1020	870	750		660/B = 6.4
0	2300	1760	1420	1170	990	850	730		690/B = 6.2
-1	2320	1770	1420	1170	990	850			800/B = 5.7
-2	2370	1810	1450	1200					1060/B = 4.9
-3									
-4									

WITH 1.75 m DIPPER ARM ALONG UNDERCARRIAGE SUPPORT DOWN**

B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5					1110*				1130*/B = 5.1
4					1070*	1120*			1180*/B = 5.8
3			1450*	1340*	1270*	1240*	1230*		1250*/B = 6.3
2			2170*	1810*	1590*	1450*	1360*		1320*/B = 6.4
1		3540*	2730*	2220*	1880*	1660*	1500*		1400*/B = 6.4
0	4580*	3630*	2920*	2420*	2050*	1780*	1560*		1480*/B = 6.2
-1	4180*	3420*	2830*	2380*	2020*	1720*			1590*/B = 5.7
-2	3430*	2850*	2380*	1980*					1640*/B = 4.9
-3									
-4									

WITH 1.75 m DIPPER ARM ACROSS UNDERCARRIAGE SUPPORT DOWN**

B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5					1110*				1130*/B = 5.1
4					1070*	1120*			1180*/B = 5.8
3			1450*	1340*	1270*	1240*	1150		1040/B = 6.3
2			2170*	1810*	1530	1300	1120		1000/B = 6.4
1		2610	2100	1740	1470	1260	1090		980/B = 6.4
0	3420	2590	2070	1710	1440	1240	1080		1030/B = 6.2
-1	3440	2600	2070	1710	1440	1240			1180/B = 5.7
-2	3430*	2640	2110	1740					1530/B = 4.9
-3									
-4									

Loads marked with an asterisk (*) are limited by the hydraulic lifting capacity.

Other loads limited due to machine stability.

**Support means dozer blade and two outriggers.

Working pressure = 21 MPa (210 bar).

The lifting tables are for 2.5 m wide excavators.

With disconnected bucket the permitted load increases by 140 kg.

LIFTING CAPACITY

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

WITH 2.30 m DIPPER ARM		ALONG UNDERCARRIAGE							SUPPORT UP
B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5						850*			930 /B= 5.8
4						840*	870		760 /B= 6.4
3					980*	990*	850	730	660 /B= 6.8
2		2010	1630	1350	1130	960	820	700	600 /B= 7.0
1		1850	1520	1270	1070	920	790	680	610 /B= 6.9
0	2280	1790	1460	1220	1030	880	760	670	630 /B= 6.7
-1	2290	1780	1440	1200	1020	870	760		700 /B= 6.3
-2	2320	1800	1460	1210	1030	890			870 /B= 5.6
-3		1870	1510						1310 /B= 4.4
-4									

WITH 2.30 m DIPPER ARM		ACROSS UNDERCARRIAGE							SUPPORT UP
B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5						850*			870 /B= 5.8
4						840*	810		700 /B= 6.4
3					980*	940	790	660	600 /B= 6.8
2		1950	1570	1280	1070	900	760	640	550 /B= 7.0
1		1790	1450	1200	1000	850	720	620	550 /B= 6.9
0	2230	1720	1380	1140	960	820	700	600	570 /B= 6.7
-1	2240	1710	1370	1120	940	800	690		640 /B= 6.3
-2	2270	1740	1380	1140	960	820			800 /B= 5.6
-3		1800	1440						1240 /B= 4.4
-4									

WITH 2.30 m DIPPER ARM		ALONG UNDERCARRIAGE							SUPPORT DOWN**
B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5						850*			950*/B= 5.8
4						840*	910*		980*/B= 6.4
3					980*	990*	990*	1010*	1040*/B= 6.8
2		2100*	1700*	1470*	1320*	1220*	1160*	1120*	1110*/B= 7.0
1		3120*	2400*	1960*	1670*	1480*	1340*	1240*	1190*/B= 6.9
0	4670*	3530*	2780*	2280*	1920*	1670*	1480*	1330*	1280*/B= 6.7
-1	4500*	3530*	2860*	2370*	2010*	1730*	1500*		1370*/B= 6.3
-2	3980*	3200*	2640*	2210*	1860*	1530*			1460*/B= 5.6
-3		2330*	1890*						1540*/B= 4.4
-4									

WITH 2.30 m DIPPER ARM		ACROSS UNDERCARRIAGE							SUPPORT DOWN**
B A	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	Max. reach
5						850*			950*/B= 5.8
4						840*	910*		980*/B= 6.4
3					980*	990*	990*	980	890 /B= 6.8
2		2100*	1700*	1470*	1320*	1220*	1110	960	830 /B= 7.0
1		2620	2100	1740	1460	1250	1070	930	840 /B= 6.9
0	3350	2550	2040	1680	1420	1210	1050	910	870 /B= 6.7
-1	3360	2540	2020	1660	1400	1200	1040		960 /B= 6.3
-2	3400	2560	2030	1670	1410	1210			1180 /B= 5.6
-3		2330*	1890*						1540*/B= 4.4
-4									

Loads marked with an asterisk (*) are limited by the hydraulic lifting capacity.

Other loads limited due to machine stability.

**Support means dozer blade and two outriggers.

Working pressure = 21 MPa (210 bar).

The lifting tables are for 2.5 m wide excavators.

With disconnected bucket the permitted load increases by 130 kg.

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

Åkerman Printing M83921/05/91 Machine No. 283 - up

VME Excavators AB
Box 115, S-241 22 ESLÖV