



Åkerman H5M

Engine output	80 kW (109 hk)
Operating weight	11.2 - 13.0 t
Bucket Capacity	150 - 600 l



The servicemachine for the toughest jobs.

Monobloc or hydraulically adjustable boom.

- * *Reversible hydraulic quickfit.*
- * *New Comfort cab with overpressure and filters.*
- * *Detachable outrigger bridge and as alternative support blade or dozer blade.*
- * *Greatest engine output of its class.*
- * *Åkerman three circuit hydraulics with hose rupture valve and float position valve for the boom movement.*

ÅKERMAN

DIESEL ENGINE



IVECO 8041 Si25 is a turbocharged 4-cylinder, 4-stroke diesel engine with water cooling and direct injection.

Cylinder diameter	104 mm
Piston stroke	115 mm
Stroke volume	3.9 dm ³
Net output at r/s (r/min)	38.3 (2300)
ISO 3046 / DIN 6271 kW (hp)	80 (109)
Max. torque at r/s (r/min)	
ISO 3046 / DIN 6271 Nm (lbf ft)	

ELECTRIC SYSTEM, 24 V



Micro processor for monitoring of engine/hydraulic system. Electric unit with flat pin fuses and relays. Battery disconnecter.

Illuminated fuel filling and engine compartments.	
Halogen working headlights.	
A.C. Generator	28 V/55 A
Battery	4 pcs. (12 V)
Battery capacity	2 x 60Ah

VOLUMES - SERVICE



Fuel tank	225 l
Hydraulically driven fuel pump, capacity	90 l/min
Cooling system (incl glycol)	19 l
Hydraulic system, total	approx. 220 l
Hydraulic oil tank	150 l
Diesel engine (lubricating oil)	11.5 l
Pump gearbox	2 l
Slew gearbox	14 l
Travel gearbox	3.7 l
Front axle	9 l
Rear axle	12 l
Hub gear	4 x 3 l

SLEWING SYSTEM



The superstructure is slewed by an axial piston motor. The deceleration is entirely hydraulically performed via valves in the slewing valve bloc.

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	7.5 r/min
90° turn, from start to stop	4.1 s
180° turn, from start to stop	6.3 s
(Bucket empty - equipment extended)	

UNDERCARRIAGE



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

The axles 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.

Twin wheels	9.00 - 20 PR 14
Travel speed, road travel 1	0 - 15 km/h
Travel speed, road travel 2	0 - 30 km/h
Travel speed, site travel 1	0 - 4.5 km/h
Travel speed, site travel 2	0 - 9 km/h
Max. tractive force, site travel	80 kN (8.2 Mp)

Brake valves protect the hydraulic motor in both travel directions.

BRAKE SYSTEM



The travel brake is of drum type to fix the wheels in a locked position in a digging operation without using supports.

Collaring is performed progressively by the steering pressure. The brakes are directly influenced via the normal servo hydraulic system of the machine and are connected in two circuits with rechargeable accumulator and separate channels also through the centre passage. The parking brake and the cab lock are multiple disc brakes in oil collared by spring power and hydraulically released.

STEERING SYSTEM



Adjustable steering wheel with orbitrol steering device. The steering system is fed by a separate steering pump.

Turning radius base machine	6.55 m
- with dozer blad	7.00 m
- with monobloc boom	7.70 m

HYDRAULIC SYSTEM



Servo controlled precision valves with a separate bloc for the slewing movement. Valves for outriggers and hammer hydraulics are standard.

The valve spools are specially adapted for their different functions with large flow areas to minimize the throttle losses.

Float valve and hose rupture valve for the boom movement are standard equipment.

Pump 1 (slew)

Max. pressure 24 MPa (240 bar)
 Max. flow 50 l/min

Pumps 2 and 3

Max. pressure 24 MPa (240 bar)
 Max. flow 2 x 66 l/min

Servo pump

Pressure 6.5 MPa (65 bar)
 Flow approx. 21 l/min

Steering pump

Pressure 14 MPa (140 bar)
 Flow 28 l/min

The hydraulic cylinders are of Åkerman manufacture with friction welded piston eye and a surface hardness of the piston rod of 850 Brinell.

Boom cylinder

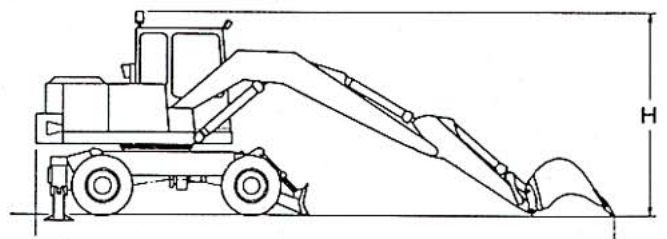
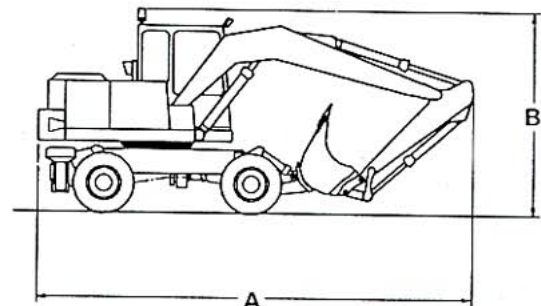
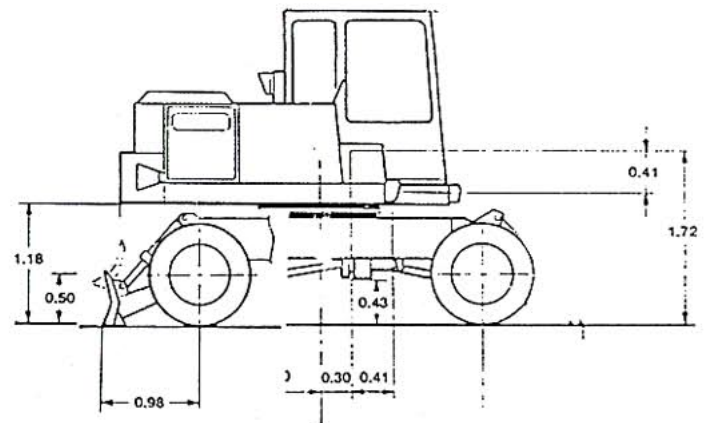
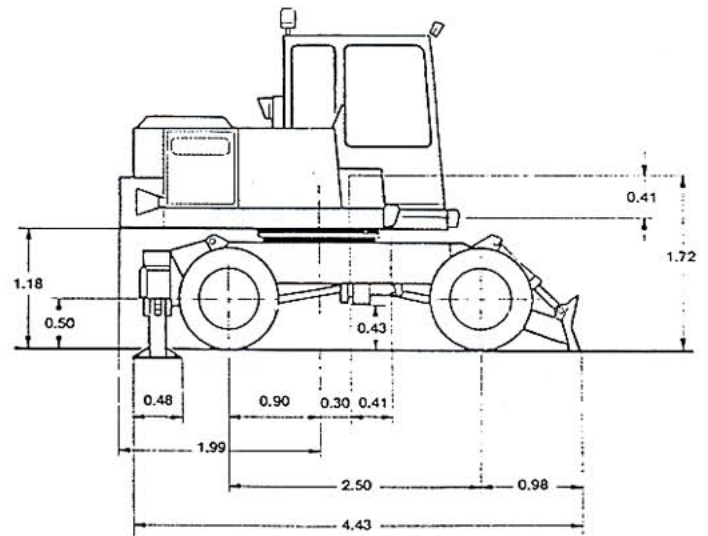
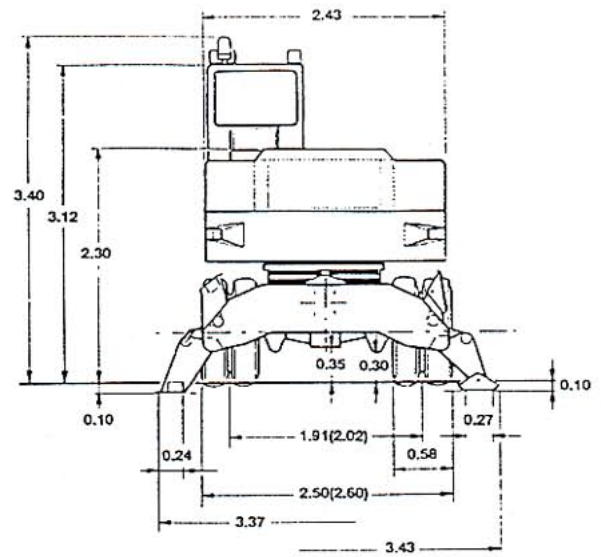
Internal diameter 140 mm
 Piston rod diameter 90 mm
 Piston stroke 950 mm
 Piston force, out 369 kN (37.7 Mp)

Dipper arm cylinder

Internal diameter 125 mm
 Piston rod diameter 80 mm
 Piston stroke 910 mm
 Piston force, out 295 kN (30.0 Mp)

Bucket cylinder

Internal diameter 110 mm
 Piston rod diameter 70 mm
 Piston stroke 800 mm
 Piston force, out 228 kN (23.3 Mp)

**CAB**

Tested cab structure according to FOPS ISO 3471.

A three-step fan creating overpressure in the all-filtrated cab.

Defroster, heating and preparations for AC are standard.

Adjustable suspension operator's seat with headrest and individually adjustable armrests and hand controls.

Emergency exits 2
 Operator's seat BEGE xxxx

Soundlevel

Surroundings (10 m distance from the machine)
 Average value L_{PA} (acoustic pressure) 69 dB(A)
 Average value L_{WA} (acoustic power) 97 dB(A)
 (ISO 6393)

Inside the cab with the door closed
 L_{PA} (acoustic pressure) 73 dB(A)
 (ISO 6394)

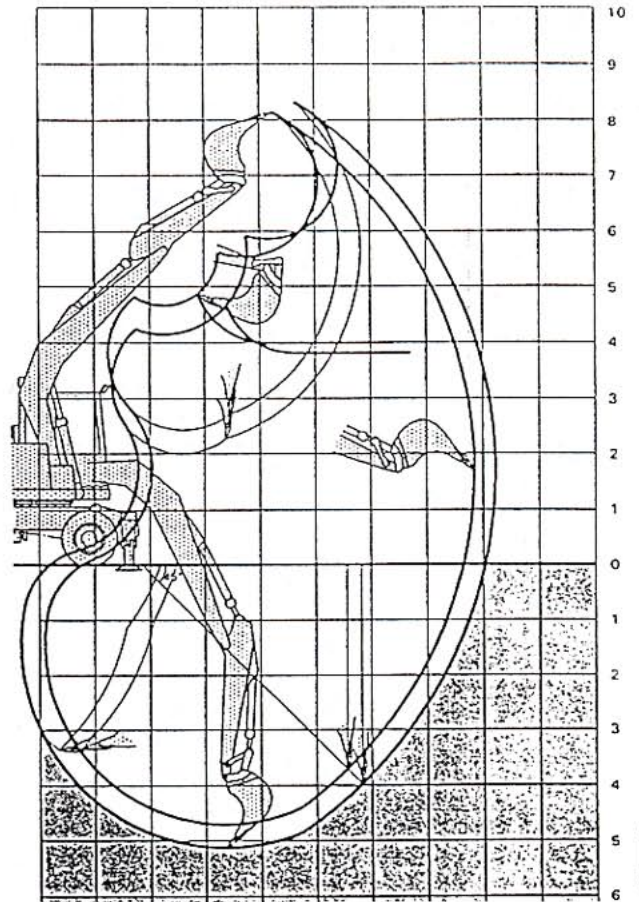
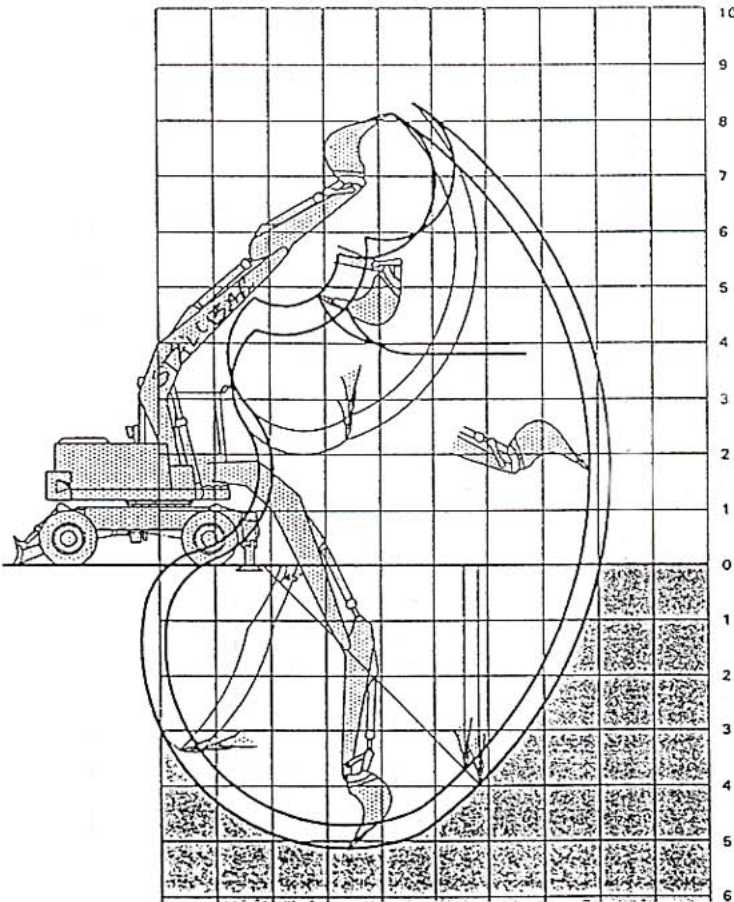
Approved according to 86/662/EEC.

MEASUREMENTS ÅKERMAN H5M

MONOBLOC BOOM

4.4 m

ADJUSTABLE BOOM



	Mono 1.9 m	Mono 2.4 m	Mono 3.0 m	Adjust 1.9 m	Adjust 2.4 m	Adjust 3.0 m
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DIGGING DATA

Bucket volume GP, SAE

Bucket volume HD, SAE

Max. reach at ground level, m

Max. digging depth, m

Max. height, ground -tooth tip, m

Max. dumping height, m

Max. practical dumping height, m

Practical digging depth at a repose of material of 45°, m

Max. vertical digging depth, m

Max. reach, slewing centre - bucket attachment, m

Max. height, ground - bucket attachment, m

Min. slewing radius in front, m

Digging force at bucket teeth

due to bucket cylinder, kN

(bucket at 176° rotation), Mp

Digging force at bucket teeth (kN)

due to dipper arm cylinder (Mp)

Front axle, t

Rear axle, t

Total weight, complete excavator with 1.9 m

dipper arm, outriggers and blade, t

600 500

7.7 8.0

4.7 5.1

8.1 8.3

5.5 5.9

4.0 3.9

3.7 4.0

3.9 4.3

6.5 6.9

6.9 7.1

2.9 2.9

63 66

(6.4) (6.7)

48 42

(4.9) (4.3)

5.8 5.8

6.8 6.8

approx. 12.6 12.6

63 66

(6.4) (6.7)

48 42

(4.9) (4.3)

13.0

LIFTING CAPACITY

MAX LOAD IN LIFTING HOOK WITHOUT BUCKET (kg) = 100% OF TIPPING LOAD

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

Monobloc Boom, 1.9 m dipper arm

Along undercarriage

Dozer blade and outriggers down

Across undercarriage

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
6			1700*			
5			1790*	1790*		
4		2260*	2000*	1870*	1530	
3		2790*	2270*	1920	1500	
2		3440*	2530*	1890	1460	
1		3520	2450	1830	1430	
0	5570*	3480	2410	1800	1410	
-1	5280*	3480	2390	1790		
-2	4740*	3470	2410	1820		
-3	3760*	2710*	1980*			
-4						

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
7			1550*			
6				1500*		
5			1540*	1570*	1420*	
4			1780*	1680*	1540	
3	3350*	2480*	2070*	1850*	1530	
2		3190*	2400*	1930*	1490	
1		3580	2500	1870	1450	
0	5620*	3500	2430	1820	1420	
-1	5480*	3480	2400	1800	1410	
-2	5100*	3490	2410	1810		
-3	4370*	3200*	2410*			
-4						

Monobloc Boom, 1.9 m dipper arm

Along undercarriage

Support blade down

Across undercarriage

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
6			1760*			
5			1840*	1410		
4		2310*	1860	1370		
3		2520	1780	1310	980	
2		2350	1670	1240	950	
1		2250	1590	1190	920	
0	3590	2210	1550	1160	900	
-1	3640	2200	1540	1150		
-2	3670	2230	1550	1180		
-3	3680	2290	1620			
-4						

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
7			1550*			
6				1500*		
5			1540*	1570*	1420*	
4			1780*	1680*	1540	
3	3350*	2480*	2070*	1850*	1530	
2		3190*	2400*	1930*	1490	
1		3580	2500	1870	1450	
0	5620*	3500	2430	1820	1420	
-1	5480*	3480	2400	1800	1410	
-2	5100*	3490	2410	1810		
-3	4370*	3200*	2410*			
-4						

Hydraulically adjustable boom, 1.9 m dipper arm

Along undercarriage

Dozer blade and outriggers down

Across undercarriage

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
6			1700*			
5			1790*	1790*		
4		2260*	2000*	1870*	1530	
3		2790*	2270*	1920	1500	
2		3440*	2530*	1890	1460	
1		3520	2450	1830	1430	
0	5570*	3480	2410	1800	1410	
-1	5280*	3480	2390	1790		
-2	4740*	3470	2410	1820		
-3	3760*	2710*	1980*			
-4						

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
6			1700*			
5			1790*	1790*		
4		2260*	2000*	1870*	1530	
3		2790*	2270*	1920	1500	
2		3440*	2530*	1890	1460	
1		3520	2450	1830	1430	
0	5570*	3480	2410	1800	1410	
-1	5280*	3480	2390	1790		
-2	4740*	3470	2410	1820		
-3	3760*	2710*	1980*			
-4						

Hydraulically adjustable boom, 1.9 m dipper arm

Along undercarriage

Support blade down

Across undercarriage

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
6			1760*			
5			1840*	1410		
4		2310*	1860	1370		
3		2520	1780	1310	980	
2		2350	1670	1240	950	
1		2250	1590	1190	920	
0	3590	2210	1550	1160	900	
-1	3640	2200	1540	1150		
-2	3670	2230	1550	1180		
-3	3680	2290	1620			
-4						

A \ B	3.0	4.0	5.0	6.0	7.0	8.0
6			1760*			
5			1840*	1410		
4		2310*	1860	1370		
3		2520	1780	1310	980	
2		2350	1670	1240	950	
1		2250	1590	1190	920	
0	3590	2210	1550	1160	900	
-1	3640	2200	1540	1150		
-2	3670	2230	1550	1180		
-3	3680	2290	1620			
-4						

Loads marked with an asterisk (*) are limited by the hydraulic lifting capacity. Other loads limited due to machine stability. Working pressure = 24 MPa (240 bar).

STANDARD EQUIPMENT

Safety and Comfort

New Comfort Cab
Cab heating with filtered air intake and defroster.
Prepared for AC.
The upper screen can be lifted up under the roof, and the lower one can be removed.
Openable side screen.
Ergonomically designed and adjustable operator's seat.
Rear view mirrors,
2 exterior
1 interior

Lights:
Travel headlights, with dim lights
Working headlights, in the front 3 Halogen lights
Stop tail lamps & tail lamps
Flush-type direction indicators

Illuminated cab, engine compartment and fuel filling compartment.
Rotating warning light.
Safety bar for control levers.
Double windscreen wipers.
Windscreen washers.
Adjustable steering wheel.
Lock on tool box.
Hydraulic refuelling pump.
Two-hand controlled hydraulic quickfit.
Security lifting hook.
Hydraulic locking of all support cylinders and oscillating axle.

Engine and electrical system.

Micro controlled monitoring system.
Battery disconnecter and main tap.
Air cleaner with indicator.
Hour meter.

Fuel meter.
Temperature meter for cooling fluid and hydraulic oil.
24 volt electrical system with 4 standard batteries.

Hydraulics.

Standard filter cartridges for return, leak oil and respiration filter systems. Nominal 15 u.
Hydromatic axial piston pumps, 3 pcs
axial piston motors, 2 pcs
Manoeuvre valves
Double for the boom function.
Outrigger and hammer/slope/ grab function standard
Float position on boom.
Hose rupture valve on boom.
Refilling pump for hydraulic oil.

High pressure tubes with SAE-couplings.
Precision honed/ground centre passage with 20 channels.

Undercarriage.

Two-step gear box driving on both axles.
Oscillating front axle +-7°.
Rear support blade.
Axles with hub reduction.
Statical fatigue Mp.

Equipment.

4.4 m monobloc boom.
1.9 m dipper arm.
Hydraulic quickfit. (Tool measure S4).
500 l backhoe bucket.
Plate cutting edge with 4 tooth tips.

OPTIONAL EQUIPMENT *(Standard on certain markets)*

UNDERCARRIAGE

Tyres 10.00 - 20 Kuhmo.
Tyres 10.00 - 20 Nokia.
Tyres 10.00 - 20 Michelin.
Dozerblade in the front.
Rear support bridge.
Oscillating outrigger plates.
Mudguards.
Widening rings 2 x 50 mm.
Stone protective rings.
Tow hook.

DIGGING EQUIPMENT

Hydraulically adjustable boom 4.62 m.
Dipper arm 2.4 m.
Cable bucket 600 l.
Articulating slope bucket 400 l.
Ripper tooth.
Hammer plate.
Hydraulic equipment for *slope bucket
*grab
*hydraulic hammer
*installation of a 4th pump.
Extra headlights on the boom.
Extra hose rupture valve on dipper arm/bucket.

SUPERSTRUCTURE-CAB

Exhaust pipe bend.
Immersion heater.
Tinted panes.
Interior and exterior glare shields.
Rear window blind.
Protective grid for front pane/roof pane.
Vandal protective plates.
Steering wheel straining device.
Support for fire extinguisher.
Additional rotating warning light.
Driver's seat with heating.
Driver's seat with air cushion suspension.
Safety belts.

Air conditioning.
Fine filter for the cab.
Micro filter for the cab.
Circulation pump for the heating system.
Combined cab/engine heater Primus 2460.
Engine heater Primus 2400.
Engine heater Primus 2440.
Radio and cassette recorder, Blaupunkt, incl. line drop.
Digital timer with clock.
Level meter incl digital display.
Special painting.
Tropical equipment.
Tools.