

Wheeled Hydraulic Excavator Specifications

MH 5 compact



Service weight 17,6 t – 20,8 t
Engine output 90 kW
Bucket capacities
0,28 - 1,05 m³ (SAE)

- PMS three-pump hydraulics
- Electronic control and monitoring system
- Deluxe cab with noise suppression
- Low noise and exhaust emissions
- “Drive“ function
- Highly fuel efficient



Powerful, comfortable and compact: the MH 5 compact from O&K



Electronic immobilizer standard

Zero-loss superstructure start-up and braking with energy recovery

4 stick options, backhoe and rock bucket plus various attachments

Generous stick and bucket working ranges

Patented multi-disc brake permits almost jolt-free working



**CE symbol according to EC Machinery Directive.
TÜV certificate for compliance with DIN ISO EN 9001.
Lifting gear operation permitted with anti-burst and
overload warning devices installed.**



Ultramodern cab in softline design
with ample space for the operator

Electronic engine and pump manage-
ment system PMS III

Powerful Deutz diesel engine, water-
cooled and clean

Fuel savings through freely selectable
engine speeds

Encapsulated ball-bearing swing ring
with lifetime lubrication

Variable-speed drive motor with auto-
matic tractive force adjustment

Comfortable multi-disc transmission,
gear-shifting under partial loads

Optimum engine and pump control with PMS III

PMS III manages engine and pump performance to unbeatable levels of comfort and efficiency. All the important functions are monitored in order to reduce downtime and extend durability. Ongoing comparison of stored target data (e.g., temperature) with actual values provides automatic adjustment of engine and pump performance in the event

of any deviations. The engine is never overworked! The diagnosis system makes any malfunctions visible and thus simplifies service.

Electronic immobilizer prevents theft

A standard feature on all O&K excavators is an electronic immobilizer which makes sure that the engine will only start up once a code has been entered. The immobilizing function is overridden by pressing the control panel keys. During

working hours the immobilizer can be disconnected and then reactivated after hours, thus preventing theft, of increasing occurrence on construction sites.

Fuel consumption down

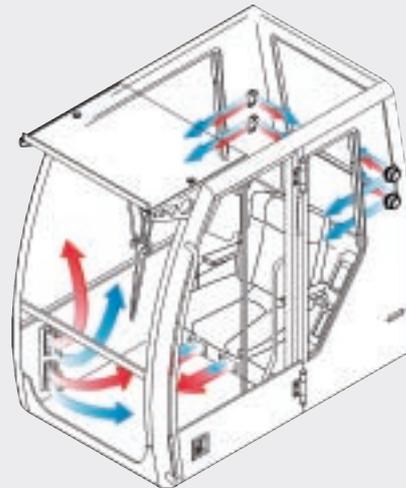
Power under control; O&K has many examples to illustrate this: alongside variable flow, prioritized ECO output level and rev-lowering under zero-load conditions. Plus the closed swing circuit preventing unnecessary hydraulic heat-buildup when swinging or braking the superstructure. Hence, less need to cool and less fuel consumption.

Outstanding precision through volume control

High-precision volume control meters exactly the right amount of oil flow for any particular function. Attachment functions are initiated with maximum sensitivity and virtually no losses. The outcome: lower oil temperatures, extended uptime for all components and appreciable fuel savings.



Performance-enhancing comfort and functional design



The air conditioning system (optional) uses an ingenious airflow system to ensure agreeable temperatures at all times.

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The ultramodern cab on the MH 5 compact has ample space for the operator plus stowage area behind the seat. The rounded tinted windows of the futuristic softline design prevent glare. The structure of the frame parts and large roof window improve upward visibility substantially. The front pane slides easily under the roof (a standard feature) where it locks safely into place. The lower part can be tilted for optimum cab ventilation.



Fits snugly behind the operator's seat: the O&K cool box (optional).

The doors have sliding windows as standard. The front roof projection in tinted Lexan glass keeps out the rain with the front window open while a standard sunshade prevents rays entering from the front and top.

The bright and stimulating colors and stylish design combine to create an agreeable working ambience. All the controls are designed and positioned according to the latest ergonomic findings. The servo-controlled levers with short throw and integrated buttons for additional functions, are conveniently positioned in the individually adjustable side consoles. Additional assets: the comfortable adjustable swing seat, the low noise level, and an extra-throughout ventilator providing slight overpressure within the cab.

Short tail - ideal dimensions for tight construction sites



The tail radius is 500 mm shorter when compared with the standard unit. This offers significant advantages, e.g. in road construction, where the second lane must continue to carry traffic. Or for excavation work with cramped space between the buildings. Despite the very compact design, the MH 5 has enormous muscle - a heavyweight in its class.

Ample reserves with drive function

With its standard drive function, this O&K unit has power to spare on rough terrain and easily negotiates steep grades when using the creep function. The variable-speed drive motor automatically adjusts travel speed and hence reduces the need for gear shifting.



Rugged and economical Deutz engine

The powerful water-cooled Deutz engine is efficient and kind to the environment. With its exceptional efficiency, the electronic Pump Managing System PMS III translates this power into ample hydraulic performance.

Quick maintenance, extended availability



Excellent accessibility to the engine and all components shortens maintenance time and boosts productivity. All service items are quickly and easily accessible. Routine maintenance is completed in no time at all. Long-term lubricated components such as the fully encapsulated ball-bearing swing ring extend maintenance intervals.

The neatly laid-out central display indicates to the operator any necessary checks and maintenance jobs. Additionally, the O&K diagnosis system records any engine and/or hydraulic malfunctions, thus acting as an early warning system before any damage occurs.



Comfortable multi-disc transmission, gear-shifting under partial loads

A multi-disc transmission makes O&K wheeled excavators even faster, with less work for the operator. The transmission shifts under part loads, i.e. gear changes are more comfortable and quicker.



Outstanding ground clearance

As the transmission is directly flanged to the rear axle, the MH 5 compact has an outstanding ground clearance. The steering cylinders are safeguarded against damage in the axle housing.

Patented multi-disc brake for almost jolt-free working

Conventional systems transfer planetary gear backlash, causing a frequent see-sawing movement of the excavator. This has been largely overcome through O&K's patented technology. Braking force is directly transferred to the brake, the excavator staying almost jolt-free. The hydraulically operated oil brake is a completely sealed system and delivers full braking action even under the most punishing conditions (in water). In contrast to pneumatic systems, there is no risk of condensing water, freezing in winter and frequently impairing braking response.



Rugged frame weldment

The rugged torsionally stiff frame is of box design and robot welded for absolute precision and a long service life.



Engine

Deutz diesel engine BF 6 M 1012 E
 Water-cooled • Exhaust-gas turbocharger • Combined cooler for hydraulic oil and coolant • Dry air filter with safety element and contamination indicator • Electric rev adjustment • Electric engine stop at key switch

Engine output ISO 9249	90 kW / 2200 RPM
Governed engine output	85 kW
Cylinders / displacement	6 / 4788 cm ³
Bore / stroke	94 mm / 115 mm
Voltage	24 V
2 batteries	each 12 V / 92 Ah
Alternator	28 V / 35 A
Starter	4 kW / 24 V

Exhaust gas emission values according to EC directive



Hydraulics

PMS 3-pump system with two main pumps and a separate swing pump • Main pumps each with individual control • Double flow • Parallel bucket circuits for 4 functions simultaneously • Microfiltration of return oil, servo and swing circuits • Flow on demand • High-pressure lines with flanged fittings

Maximum delivery main pumps	2 x 170 l/min
Maximum delivery swing pump	62 l/min
Maximum pressure without booster	320 bar
Maximum pressure with booster	360 bar
Maximum pressure, swing gear	390 bar



Control and monitoring system

Engine and pump monitoring system with electronic load limit (PMS III) • Controlled heat-up phase • Engine and hydraulic system temperature monitoring, with rev limit to protect engine and pumps • Automatic rev return

4 output levels:

	Drive	Heavy	Eco	Lift
RPM	2200	2100	2000	1800
Pump output	–	100 %	90 %	65 %



Swing gear

Swing pump/motor within sealed circuit for zero-loss superstructure start-up and braking • Swing gear with built-in wear-proof multi-disc brake • Encapsulated ball-bearing swing ring with lifetime lubrication

Effective slewing moment	43 kNm
Max. rpm	7.8



Cab

Tinted safety glass • Front top pane retracts, lower part removable • Sliding windows in the doors • Roof window • Rain-protection roof • Three-speed blower • Defroster nozzles for leg area and front windows • Central display for all control and monitoring functions • Deluxe seat • Control functions to SAE recommendations • Individually adjustable side consoles • Ergonomic servo-control levers



Drive

Hydraulic all-wheel variable-speed drive • "Drive" function • Tractive forces adjusted automatically • Planetary excavator axle with integrated, directly-acting multi-disc brakes • Steering cylinder integrated within the axle • Transmission flanged to axle

Max. effective tractive force	130 kN		
Max. travel speed	Terrain	low gear:	5.5 km/h
	Road	high gear:	20.0 km/h
Creep speed		low gear:	2.0 km/h
		high gear:	8.0 km/h
Standard tyres (8)	10.00-20		



Capacities

Fuel tank	260 l
Cooling system	22 l
Engine oil incl. filter	16 l*
Slewing gear	3,5 l*
Hydraulic tank	200 l*
Hydraulic system	315 l

* for oil change

Equipment

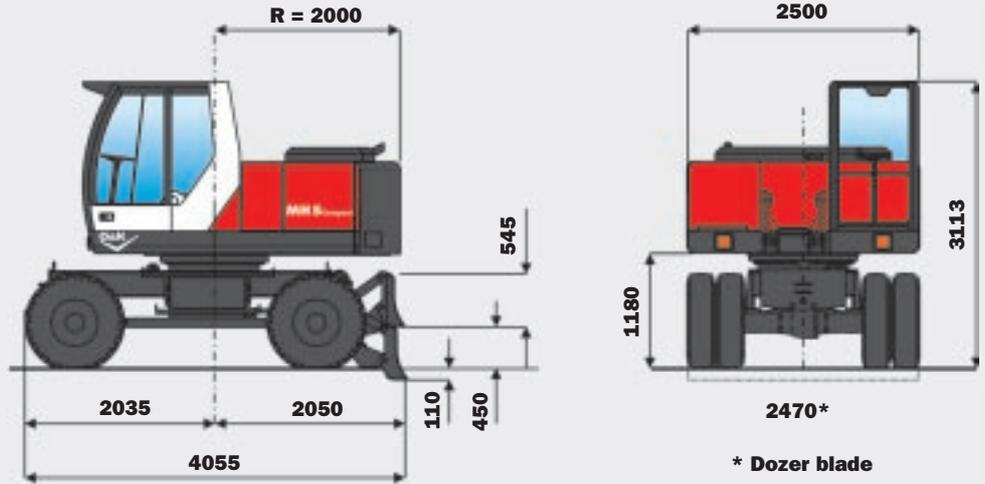
Low maintenance through hardened and corrosion-protected bearing pins, low-wear bushings, sealed bearings and easily accessible grease distributor for boom • Progressive end-of-stroke dampening • Spotlight mounted on boom

Options

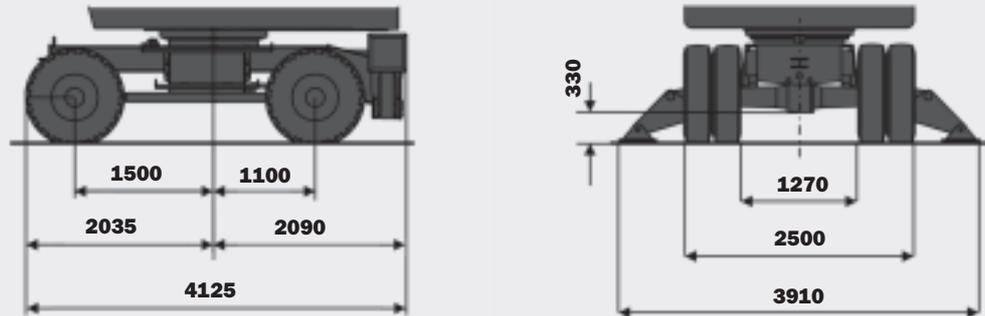
A/C • Eco-friendly hydraulic oil • Auxiliary heating • Anti-burst and overload warning devices • Pressure booster with power boost operation • Spacers • Cassette/radio • Additional headlamp • Electric refuelling • Special tyres • Grab swivel device • Comfort package

Dimensions and weights

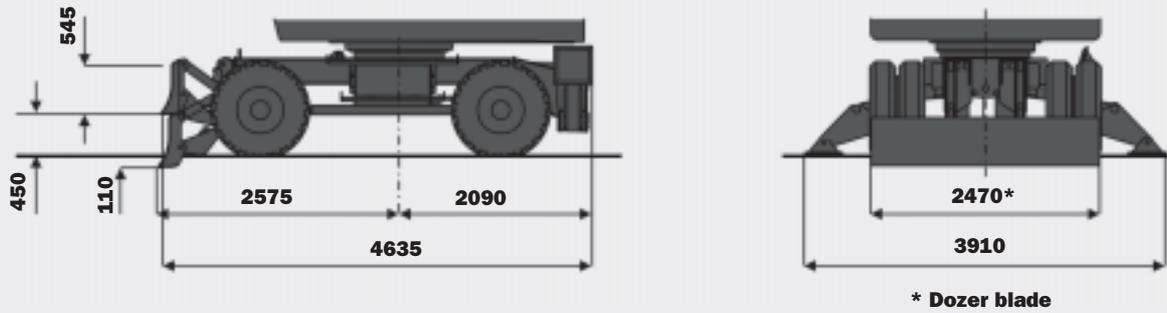
PLA



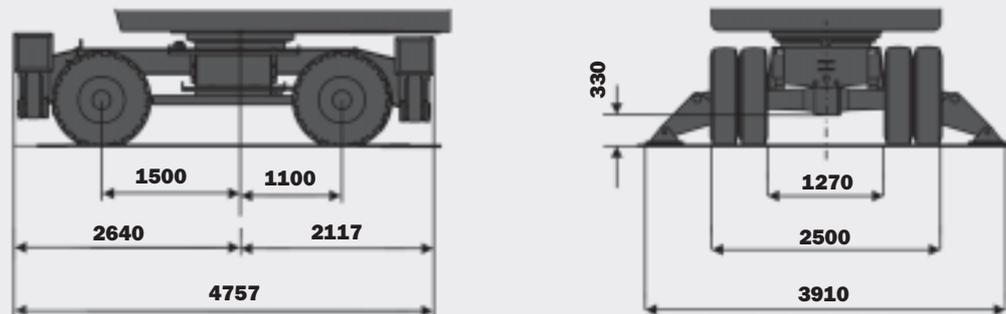
A2



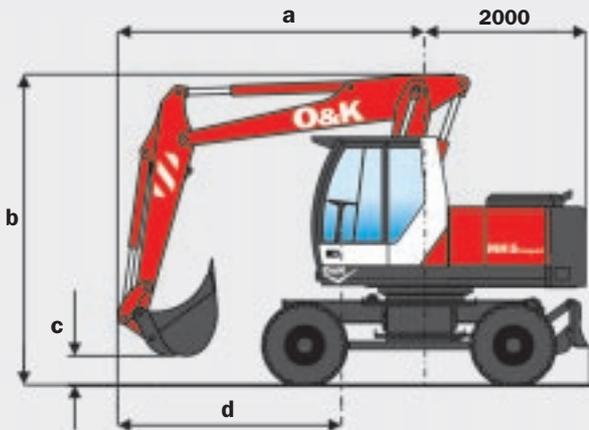
PLA/A2



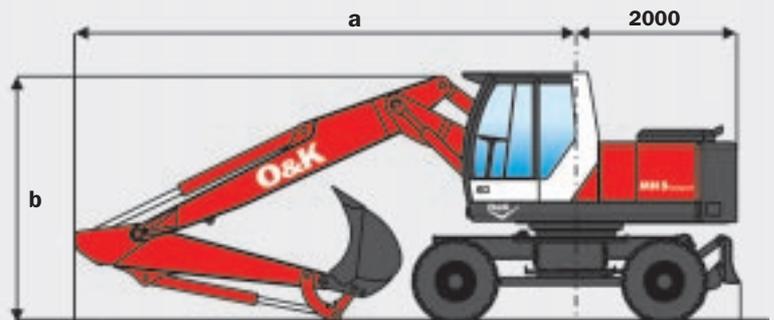
A4



Dimensions and weights



Road travel



Loaded

Road travel				
Sticks	Backhoe equipment PLA or A2			
	a	b	c	d
2.4 m	4150	4000	370	3100
2.7 m	4150*	4000*	400*	3100*
2.9 m	4100*	4000*	250*	3100*
3.6 m	Road travel not permitted			
Sticks	Backhoe equipment PLA/A2 or A4			
	a	b	c	d
2.4 m	4250	4000	250	3200
2.7 m	4150*	4000*	400*	3100*
2.9 m	4100*	4000*	250*	3100*
3.6 m	Road travel not permitted			

* without bucket

Road travel				
Sticks	Grab equipment PLA, A2, A4 and PLA/A2			
	a	b	c	d
2.4 m	4300	4000	690	3250
2.7 m	4250	4000	380	3200
2.9 m	4100*	4000*	250*	3100*
3.6 m	Road travel not permitted			

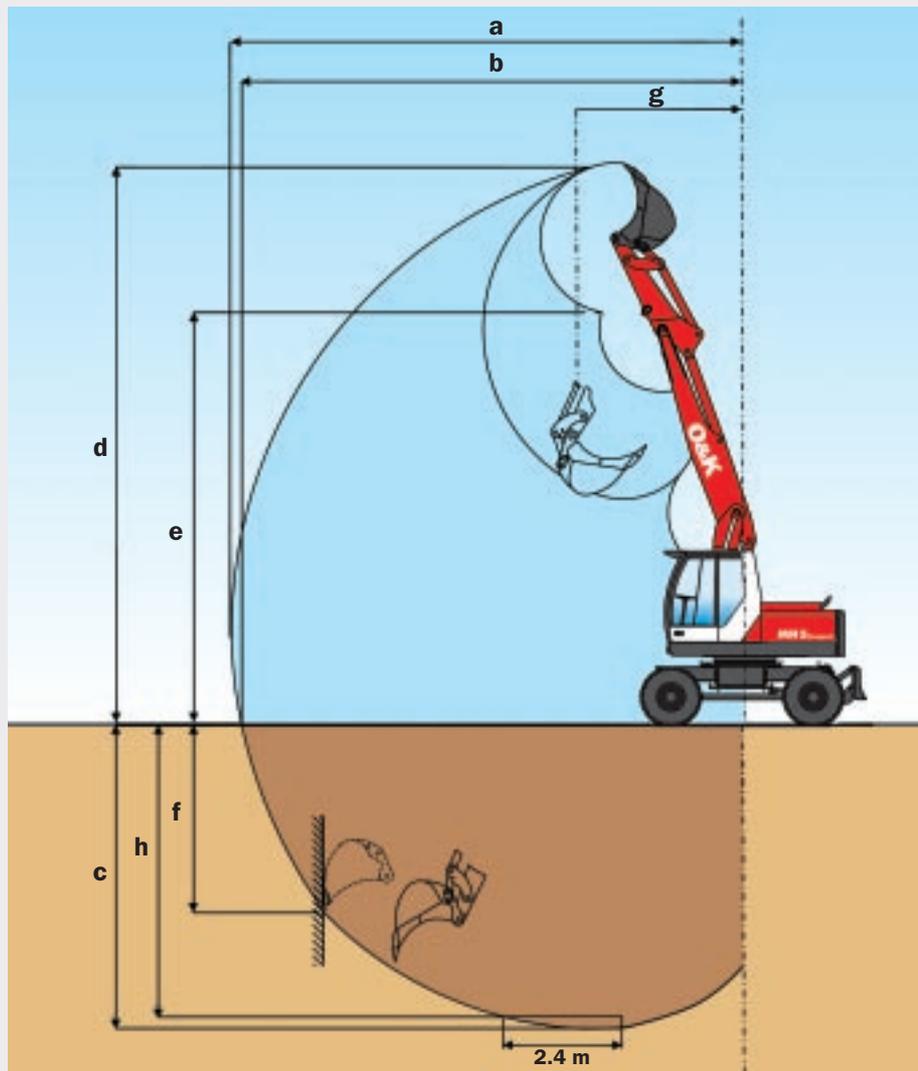
* without bucket

Loading dimensions for equipment				
Sticks	Adjustable boom		Monoboomb	
	a	b	a	b
2.4 m	6300	3300	6450	3150
2.7 m	6300	3350	6450	3200
2.9 m	6300	3400	6450	3300
3.6 m	6250*	3450*	6450*	3360*

* without cab

	Weight of backhoe Adjustable boom 2.0/3.6 m Stick 2.4 m Backhoe 0.6 m ³ SAE	Weight of backhoe Monoboomb 5.2 m, Stick 2.4 m Backhoe 0.6 m ³ SAE
	MH compact PLA	18.3 t
MH compact A2	18.7 t	18.2 t
MH compact PLA/A2	19.3 t	18.8 t
MH compact A4	20.6 t	20.1 t

Working area with backhoe and adjustable boom

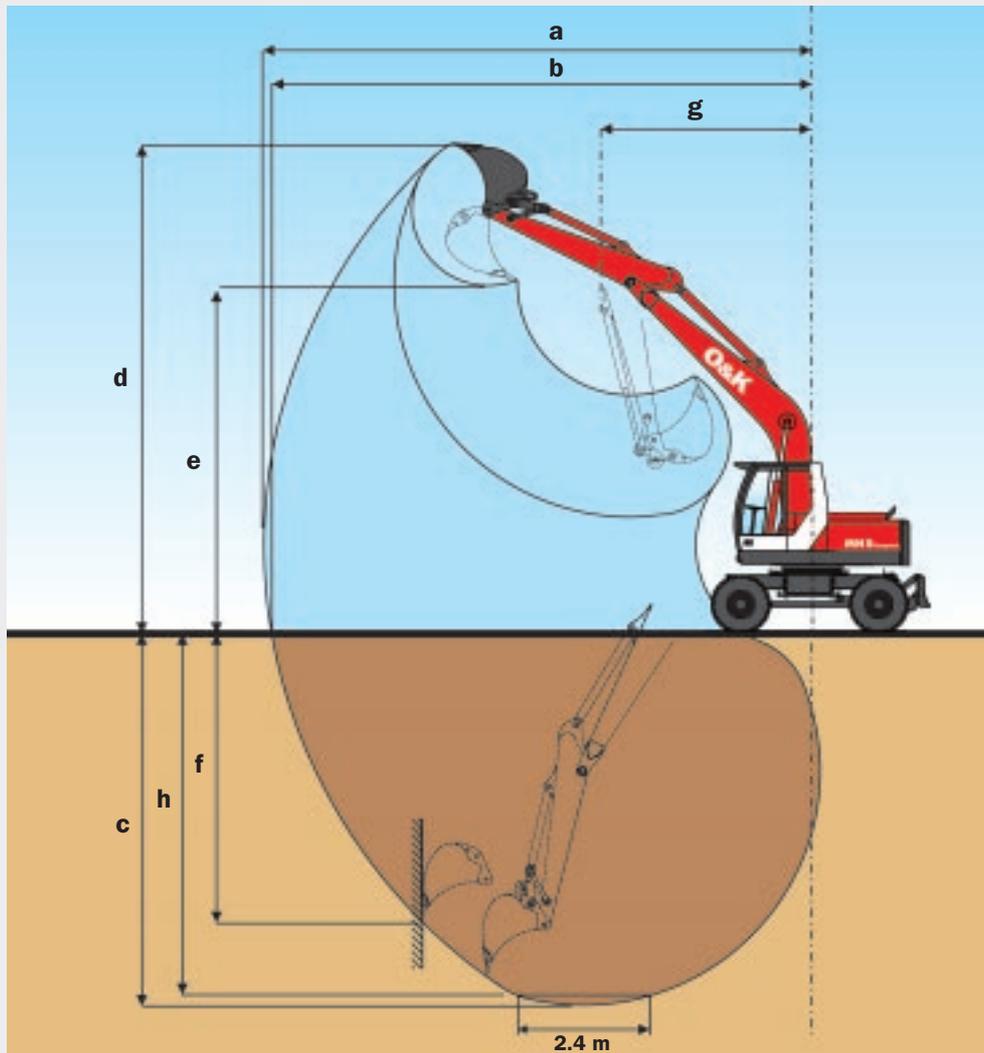


		Stick length	2.4 m	2.7 m	2.9 m	3.6 m
Range						
a	Max. reach	m	8.9	9.2	9.4	10.1
b	Max. reach at level ground	m	8.7	9.0	9.4	9.9
c	Max. digging depth	m	5.6	5.9	6.1	6.8
d	Max. penetration height	m	9.3	9.5	9.6	10.1
e	Max. dump height	m	6.9	7.1	7.3	7.7
f	Max. vertical digging depth	m	3.9	4.1	4.3	5.0
g	Min. slewing radius	m	3.1	3.1	3.1	3.3
h	Max. digging depth at 2.4 m (8") wide base	m	5.5	5.8	6.1	6.8

		Digging forces			
Stick		2.4 m	2.7 m	2.9 m	3.6 m
Breakout force*	kN	124	124	124	124
Ripping force*	kN	112	103	98	84

* with booster

Working area with backhoe and monoboam

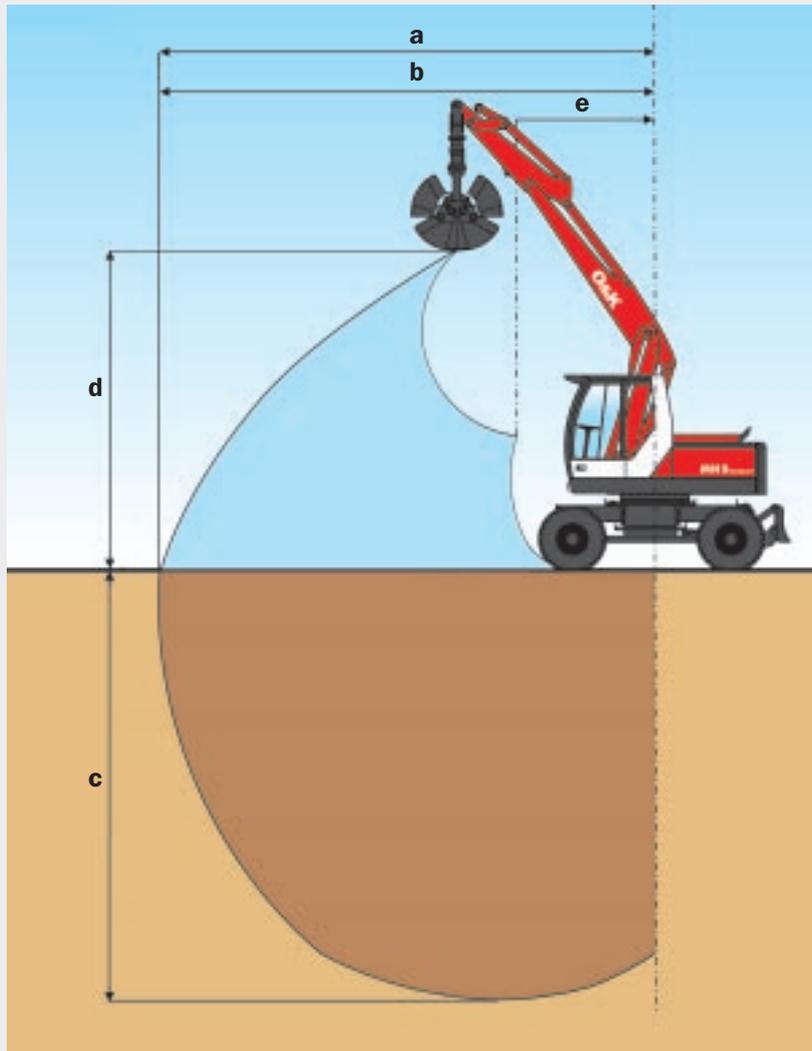


		Stick length	2.4 m	2.7 m	2.9 m	3.6 m
Range						
a	Max. reach	m	9.0	9.3	9.5	10.2
b	Max. reach at level ground	m	8.8	9.1	9.3	10.0
c	Max. digging depth	m	5.7	6.0	6.2	6.9
d	Max. penetration height	m	8.5	8.6	8.7	9.1
e	Max. dump height	m	6.2	6.4	6.5	6.8
f	Max. vertical digging depth	m	3.8	4.0	4.2	4.9
g	Min. slewing radius	m	3.8	3.7	3.7	3.7
h	Max. digging depth at 2.4 m (8") wide base	m	5.5	5.8	6.0	6.8

		Digging forces			
Stick		2.4 m	2.7 m	2.9 m	3.6 m
Breakout force*	kN	124	124	124	124
Ripping force*	kN	112	103	98	84

* with booster

Working area with grab and adjustable boom

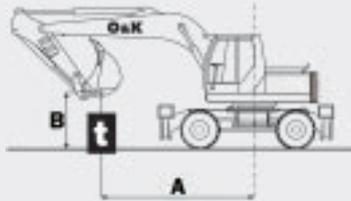


		Stick length	2.4 m	2.7 m	2.9 m	3.6 m
Range						
a	Max. reach	m	7.7	8.0	8.2	8.9
b	Max. reach at level ground	m	7.7	8.0	8.2	8.9
c	Max. digging depth	m	6.7	7.2	7.4	8.1
d	Max. height	m	5.7	5.9	6.0	6.5
e	Min. slewing radius	m	3.3	3.4	3.4	3.6

Grab equipment	
Closing force*	65 kN

* with booster

Lift capacities



As per ISO 10567, the specified values represent 75 percent of the static tipping load or 87 percent of the hydraulic lift capacity. The values apply with booster activated.

- a Total slewing range 360°.
- b as previously, but with undercarriage stabilized.
- c Longitudinal direction +/-15°.
- d as previously, but with undercarriage stabilized.
- * Limited by hydraulic system.

Adjustable boom 2.0/3.6 m • Backhoe 0.6 m³ SAE

MH 5 compact PLA										Adjustable boom											
Sticks	A	3.0 m				4.5 m				6.0 m				7.5 m				max.			
		B	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d			
	4.5 m					3.6*	3.6*	3.6*	3.6*	2.7	3.1	3.4*	3.4*								
	3.0 m	7.5	8.6	8.7*	8.7*	4.1	4.6	5.1*	5.1*	2.7	3.0	4.0*	4.0*	1.6	1.9	3.0	3.6*				
	1.5 m	7.2	8.3	10.3*	10.3*	4.0	4.5	6.6	6.7*	2.7	3.0	4.3	4.8*	1.6	1.8	2.9	4.0*				
	2.4 m Gr. level	7.4	8.4	12.2*	12.2*	4.1	4.6	6.6	7.7*	2.5	2.9	4.3	5.4*	1.4	1.7	2.8	4.2	1.4	1.7	2.7	3.8*
	-1.5 m	7.0	8.3	13.3	13.4*	3.8	4.4	6.8	8.0*	2.2	2.6	4.1	5.6*								
	-3.0 m	6.8	8.1	13.9	13.9*	3.4	4.0	6.5	8.4*	2.0	2.4	3.9	5.2*								
	4.5 m									2.7	3.1	3.1*	3.1*	1.7	2.0	3.1	3.2*				
	3.0 m	7.5	7.5*	7.5*	7.5*	4.1	4.6	4.7*	4.7*	2.7	3.0	3.8*	3.8*	1.7	2.0	3.1	3.4*				
	1.5 m	7.2	8.2	10.2*	10.2*	4.0	4.5	6.4*	6.4*	2.6	3.0	4.2	4.6*	1.6	1.9	3.0	3.8*				
	2.7 m Gr. level	7.2	8.3	11.9*	11.9*	4.0	4.5	6.5	7.5*	2.5	2.9	4.2	5.2*	1.4	1.7	2.8	4.1*	1.3	1.6	2.5	3.6*
	-1.5 m	7.0	8.3	13.1	13.2*	3.8	4.4	6.7	7.9*	2.2	2.6	4.1	5.5*								
	-3.0 m	6.8	8.1	13.6	13.6*	3.5	4.1	6.5	8.2*	2.0	2.4	3.9	5.5*								

MH 5 compact PLA/A2										Adjustable boom											
Sticks	A	3.0 m				4.5 m				6.0 m				7.5 m				max.			
		B	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d			
	4.5 m					3.6*	3.6*	3.6*	3.6*	2.9	3.4*	3.4*	3.4*								
	3.0 m	7.7	8.7*	8.7*	8.7*	4.3	5.1*	5.1*	5.1*	2.8	4.0*	4.0*	4.0*	1.7	3.2	3.2	3.6*				
	1.5 m	7.6	10.3*	10.3*	10.3*	4.2	6.7*	6.7*	6.7*	2.8	4.5	4.4	4.8*	1.7	3.1	3.1	4.0*				
	2.4 m Gr. level	7.6*	12.2*	12.2*	12.2*	4.2	6.8	6.8	7.7*	2.6	4.5	4.5	5.4*	1.5	3.0	2.9	4.2*	1.5	2.9	2.8	3.8*
	-1.5 m	7.4	13.4*	13.4*	13.4*	4.0	7.0	7.0	8.0*	2.3	4.3	4.3	5.6*								
	-3.0 m	7.2	13.9*	13.9*	13.9*	3.6	6.8	6.8	8.4*	2.2	4.1	4.1	5.2*								
	4.5 m									2.9	3.1*	3.1*	3.1*	1.8	3.2*	3.2*	3.2*				
	3.0 m	7.5*	7.5*	7.5*	7.5*	4.3	4.7*	4.7*	4.7*	2.8	3.8*	3.8*	3.8*	1.8	3.2	3.2	3.4*				
	1.5 m	7.5	10.2*	10.2*	10.2*	4.1	6.4*	6.4*	6.4*	2.7	4.4	4.4	4.6*	1.7	3.1	3.1	3.8*				
	2.7 m Gr. level	7.5	11.9*	11.9*	11.9*	4.1	6.7	6.7	7.5*	2.7	4.4	4.4	5.2*	1.6	3.0	3.0	4.1*	1.4	2.7	2.7	3.6*
	-1.5 m	7.4	13.2*	13.2*	13.2*	4.0	6.9	6.9	7.9*	2.4	4.3	4.3	5.5*								
	-3.0 m	7.2	13.6*	13.6*	13.6*	3.6	6.8	6.8	8.2*	2.2	4.1	4.1	5.5*								



Monoboomb 5.2 m • Backhoe 0.6 m³ SAE

MH 5 compact PLA																Monoboomb											
Sticks	A B	3.0 m				4.5 m				6.0 m				7.5 m				max.									
		a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d						
	4.5 m									2.7	3.1	3.6*	3.6*	1.7	2.0	3.0*	3.0*										
	3.0 m					3.9	4.5	5.6*	5.6*	2.5	2.9	4.3*	4.3*	1.6	1.9	3.0	3.8*										
	1.5 m					3.5	4.1	6.5	7.1*	2.3	2.7	4.1	5.0*	1.5	1.8	2.9	4.1*										
2.4 m	Gr. level	5.9	7.1	7.1*	7.1*	3.2	3.8	6.2	8.0*	2.1	2.5	3.9	5.6*	1.5	1.7	2.8	4.2	1.4	1.6	2.6	3.0*						
	-1.5 m	6.0	7.1	11.5*	11.5*	3.2	3.7	6.1	8.1*	2.1	2.4	3.9	5.7*														
	-3.0 m	6.1	7.3	11.3*	11.3*	3.2	3.8	6.1	7.5*	2.1	2.5	3.9	5.2*														
	4.5 m									2.7	3.1	3.3*	3.3*	1.7	2.0	3.1	3.3*										
	3.0 m	7.4	8.5*	8.5*	8.5*	4.0	4.6	5.2*	5.2*	2.5	2.9	4.0*	4.0*	1.6	1.9	3.0	3.6*										
	1.5 m					3.5	4.1	6.5	6.8*	2.3	2.6	4.1	4.8*	1.5	1.8	2.8	3.9*										
2.7 m	Gr. level	5.9	7.0	7.3*	7.3*	3.2	3.8	6.2	7.8*	2.1	2.5	3.9	5.4*	1.4	1.7	2.7	4.2	1.3	1.5	2.4	2.6*						
	-1.5 m	5.8	7.0	10.9*	10.9*	3.1	3.7	6.0	8.1*	2.0	2.4	3.8	5.7*	1.4	1.7	2.7	4.1										
	-3.0 m	6.0	7.2	11.7*	11.7*	3.1	3.7	6.0	7.6*	2.0	2.4	3.8	5.4*														

MH 5 compact PLA/A2																Monoboomb											
Sticks	A B	3.0 m				4.5 m				6.0 m				7.5 m				max.									
		a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d						
	4.5 m									2.8	3.6*	3.6*	3.6*	1.8	3.0*	3.0*	3.0*										
	3.0 m					4.1	5.6*	5.6*	5.6*	2.6	4.3*	4.3*	4.3*	1.7	3.1	3.1	3.8*										
	1.5 m					3.7	6.8	6.8	7.1*	2.4	4.3	4.3	5.0*	1.7	3.0	3.0	4.1*										
2.4 m	Gr. level	6.3	7.1*	7.1*	7.1*	3.4	6.5	6.5	8.0*	2.3	4.2	4.1	5.6*	1.6	2.9	2.9	4.3*	1.5	2.7	2.7	3.0*						
	-1.5 m	6.3	11.5*	11.5*	11.5*	3.4	6.4	6.4	8.1*	2.2	4.1	4.1	5.7*														
	-3.0 m	6.4	11.3*	11.3*	11.3*	3.4	6.4	6.4	7.5*	2.2	4.1	4.1	5.2*														
	4.5 m									2.8	3.3*	3.3*	3.3*	1.8	3.2	3.2	3.3*										
	3.0 m	7.7	8.5*	8.5*	8.5*	4.2	5.2*	5.2*	5.2*	2.6	4.0*	4.0	4.0	1.7	3.1	3.1	3.6*										
	1.5 m					3.7	6.8	6.8	6.8*	2.4	4.3	4.3	4.8*	1.6	3.0	3.0	3.9*										
2.7 m	Gr. level	6.2	7.3*	7.3*	7.3*	3.4	6.5	6.5	7.8*	2.2	4.1	4.1	5.4*	1.5	2.9	2.9	4.2*	1.4	2.5	2.5	2.6*						
	-1.5 m	6.2	10.9*	10.9*	10.9*	3.3	6.3	6.3	8.1*	2.1	4.0	4.0	5.7*	1.5	2.9	2.9	4.3*										
	-3.0 m	6.3	11.7*	11.7*	11.7*	3.3	6.4	6.3	7.6*	2.2	4.0	4.0	5.4*														

Attachments

Overall dimensions and weights



		Monoboom			Adjustable boom		Stick			
					Lower part	Upper part				
System length	m		5.20		2.00	3.60	2.40	2.70	2.90	3.60
Weight	kg		1220		545	1150	605	665	695	810
Linkage	kg		-		-	-	140	140	140	140
Cylinders	kg		280		250	280	125	125	125	125

Trenching buckets



		Rock backhoe					Backhoe				
Capacity (CECE)	m³	0.40	0.50	0.60	0.70	0.80	0.25	0.30	0.50	0.80	0.95
Capacity (SAE)	m³	0.48	0.57	0.70	0.79	0.88	0.28	0.36	0.57	0.88	1.05
Width	mm	750	850	1000	1100	1200	500	600	850	1200	1200
Weight	kg	444	486	499	555	605	362	384	486	605	645

Further buckets on request

Clamshell buckets

Capacity	m³	0.30	0.40
Width	mm	600	800
Weight	kg	550	595
A	m	1.60	1.60
B	m	2.43	2.43
C	m	1.35	1.35



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