Midi Excavators

MH 2.5 / MH 3.5

O&K

A great deal on wheels, from 8.9 to 12.2 t

Compact, strong,

End-of-stroke damping on the hydraulic cylinders for improved longevity

Swing gear pressure-regulated for fast swing-off and spot-on braking

Articulated joint for on-site flexibility and working alongside walls

Various attachments: grab piping to center stick all standard

Rugged axles with oil-bath multi-disc brakes, front axle oscillates

	Service weight t	Engine output ISO 9249 kW	Bucket capacities SAE m^3
MH 2.5	8.9 – 9.5	53	0.05 – 0.29
MH 3.5	11.7 – 12.2	67	0.2 – 0.59

TÜV CERT DIN EN ISO 9001

CE

Conformity with the EC Machinery Directive

and cost saving

Roomy deluxe cab
with ergonomic controls

Very narrow tail radius

Clean and powerful,
electronically governed
Perkins engines

Rapid maintenance
with easy accessibility
to all components

6-stage hydrostatic drive with variable-
speed hydraulic motor

Three steering modes for
superior agility: 2/4 wheel
steering and crab crawl

Plenty of comfort and even

From the outside compact, from the inside spacious and deluxe. Surroundings for superior productivity.

User-friendly work station: stress-free and productive

O&K's midi excavators feature generously dimensioned cabs with plenty of space for the operator. The comfortable seat is individually adjustable to his size and weight. All the controls are laid out according to the latest ergonomic research. A multi-functional lever allows single-handed control of all working functions (the operator need never let go of the lever), including the dozer blade, stabilizers and any extra functions. The steering column adjusts steplessly to match the operator's preferred seating position.

The operator's view of the working area is ideal, with generously sized windows allowing all-round visibility. Lifted loads are easily viewed through the roof window.

The ambience within the cab is always conducive to productivity, a rear-window blind and stereo radio are both standard.

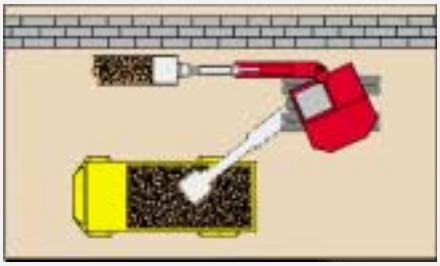
Making the operator feel at home, helping him to give his best.

Outstanding view of the working area and of the neatly laid-out instruments.

A single multi-function lever for effortless and practical control of all the working functions.

The console includes an electronic engine speed governor for efficient control of engine RPM. Pressing the Economy key (standard mode) lowers fuel consumption with no compromise in power.

more productivity



Articulated joint accelerates working under cramped conditions

A typical day's work for O&K's midi machines: delivering productivity and profitability under cramped conditions. This is where the articulating boom comes into its element, enabling the business end of the excavator to be offset to either side, thus allowing the machine to work effortlessly alongside walls, hedges, and embankments.

The boom articulates to allow O&K's midi excavators to work close alongside any obstacles.

Swing gear pressure regulation accelerates superstructure swing-off while ensuring spot-on braking. The required pressure is always and instantly available.

End-of-stroke damper for fluent functions, less stress, and hence extended durability.

A tight swing radius, generous action radius

Because these excavators are so remarkably compact, they can slip into the tightest of corners. What's more, the swing angle and boom design are such as to allow the attachment to work right up close to the host machine. All this permits the machine to operate on cramped sites where productivity is nonetheless of the essence.

Fuel-saving engines, time-saving servicing

This innovative stepped motor on the O&K midi excavators is interconnected to the board computer and electronic RPM governor to allow very precise engine speed regulation.

Economical, long-lasting engine, with power to spare

The clean Perkins engines are engineered for performance and durability. A slow RPM, a low mean piston speed, and a favorable power/displacement ratio all lead to reduced consumption, less wear and year-in, year-out dependability.

Again easy to reach: fuel and air filters.

Quick servicing – back in service in no time at all

The large fiber-glass reinforced rear hood lifts completely, allowing easy access to the components beneath. The side covers open wide, too. Hydraulic oil cooler and engine radiator have large heat-dissipating surfaces while the vanes are designed to lower heat build-up, too.

Cross-sensing output control permits full utilization of engine power with the superstructure in full swing, the boom rising and the boom stick extending.

Load sensing ensures smooth and sensitive start-up of the various services, with all functions operating swiftly and simultaneously.

As oil flow is limited to what is actually needed, energy losses are minimized.

Another easily accessible component: the battery. Electric emergency disconnect for the battery, another safety feature.

Powerful –
whatever the terrain

Generous ground clearance for excellent terrainability. The front axle oscillates (14°) and is hydraulically lockable at any angle.

Good terrainability and stability

Rugged axles and stabilizing options (dozer blade, 2- and 4-point) deliver good driveability and stability. Six-stage hydrostatic drive (3 travel/3 working ranges) lets the operator select the ideal travel and working speeds. The variable hydraulic motor ensures a perfect match of speed and tractive force.

The oil-bath multi-disc brakes ensure gentle yet effective braking response. The brakes themselves need no adjustment.

Three steering modes for superior maneuverability.

Two- and four-wheel steering allows these excavators to access the tightest corners while the crab crawl option permits the machine to snuggle up close to walls. Maneuvering couldn't be easier. The operator simply selects the desired mode at the control console.

4-wheel steering

Crab crawl

The dozer blades lifts 507 mm, allowing grade negotiability of up to 29°.

“ It's the versatility of these midi excavators that most impressed me. Their agility is remarkable, just as their flexibility, thanks to the articulating boom. These are real practical advantages. ”

Specifications MH 2.5

Motor

Water cooled • Automatic rev lowering • Electric rev governing • Engine preheater • Dry-type engine filter with safety cartridge • Economy key for lower fuel consumption • Cold start down to -18°

Engine output ISO 9249	53 kW / 1800 RPM
Cylinders / displacement	4 / 4233 cm^3
Bore / stroke	103 mm / 127 mm
Board electrical system	24 V
2 batteries	12 V / 75 Ah each
Alternator	55 A
Starter	4 kW

Exhaust emissions in accordance with statutory regulations

Hydraulics

Load-sensing hydraulics with output control (cross sensing) • Swing gear pressure regulation • Cylinders with end-of-stroke damping

Output, attachment pumps	150 l/min
Output, swing gear pump	50 l/min
Max. pressure	350 bar
Max. pressure, swing gear	310 bar

Brakes

Service brakes:
Oil-bath, multi-disc, acting on all four wheels, 2 independent circuits

Parking brake:
Oil-bath, multi-disc, mechanically engaged and electro-hydraulically released. Added safety through 2 independent circuits (back-up if one fails).

Steering

3 steering options: 2-wheel, 4-wheel, crab-crawl
Selectable from switch inside cab • Selected mode displayed • Lamp indicating position of rear wheels

Type	Orbitrol, with safety valves
Pump	Gear-type, with emergency steering properties
Turning radius, outer edge of tyres	
2-wheel steering	6000 mm
4-wheel steering	3600 mm

Swing gear

Swing gear with automatic multi-disc brake in oil bath • Slewing gear with internal gearing, in grease bath • Planetary final drive

Max. slewing speed	9.0 RPM

Cab

Heat-absorbent glazing • Sunshade for rear window • Sliding window on the right • Roof window • Deluxe seat • Single multi-functional lever • Control functions to SAE • Steplessly adjustable steering column • Stereo radio • Safety belt

Drive system

Hydrostatic all-wheel • Axles with oil-bath multi-disc brakes • Rear axle, rigid, steerable • Front axle, oscillates 15°, steerable • Oscillation lock • Gearbox flanged to the axle

Max. travel speeds		
	1st gear	9.0 km/h
	2nd gear	14.0 km/h
	3rd gear	20.0 km/h
Gradability		16 %
Max. working speeds		
	1st gear	3.0 km/h
	2nd gear	5.0 km/h
	3rd gear	8.0 km/h
Tyres		
Dual tyres, with spacers		8.25 x 20
Ground clearance		320 mm

Capacities

Fuel tank	147 l
Coolant	18.5 l
Engine oil	8.5 l
Swing gear	3.0 l
Hydraulic system	120 l
Axles (total)	19 l

Options

A/C • Backhoes from 280 mm to 800 mm • Sticks 1850 mm and 2200 mm • Rear stabilizers • Front and rear stabilizers • Single tyres 500/45-20 • Anti-burst device on the boom and stick cylinders • Hydraulics for hammer/scrap cutter

Specifications MH 3.5

Engine

Water cooled • Turbo charger • Automatic rev lowering • Electric rev governing • Engine preheater • Dry-type engine filter with safety cartridge • Economy key for lower fuel consumption • Cold start down to -18°

Engine output ISO 9249	67 kW / 1900 RPM
Cylinders / displacement	4 / 3990 cm^3
Bore/stroke	100 mm / 127 mm
Board electrical system	24 V
2 batteries	12 V / 75 Ah each
Alternator	55 A
Starter	4 kW

Exhaust emissions in accordance with statutory regulations

Hydraulics

Load-sensing hydraulics with output control (cross sensing) • Swing gear pressure regulation • Cylinders with end-of-stroke damping

Output, attachment pumps	150 l/min
Output, swing gear pump	53 l/min
Max. pressure	350 bar
Max. pressure, swing gear	310 bar

Brakes

Service brakes:
Oil bath, multi-disc, acting on all four wheels, 2 independent circuits

Parking brake:
Oil-bath, multi-disc, mechanically engaged and electro-hydraulically released. Added safety through 2 independent circuits (back-up if one fails).

Steering

3 steering options: 2-wheel, 4-wheel, crab-crawl •
Selectable from switch inside cab • Selected mode displayed • Lamp indicating position of rear wheels

Type	Orbitrol, with safety valves
Pump	Gear-type, with emergency steering properties
Turning radius, outer edge of tyres	
2-wheel steering	6500 mm
4-wheel steering	3700 mm

Swing gear

Swing gear with automatic multi-disc brake in oil bath • Slewing gear with internal gearing, in grease bath • Planetary final drive

Max. slewing speed	8.0 RPM

Cab

Heat-absorbent glazing • Sunshade for rear window • Sliding window on the right • Roof window • Adjustable console • Deluxe seat • Single multi-functional lever • Control functions to SAE • Steplessly adjustable steering column • Stereo radio • Safety belt

Drive system

Hydrostatic all-wheel • Axles with oil-bath multi-disc brakes • Rear axle, rigid, steerable • Front axle, oscillates 14°, steerable • Oscillation lock • Gearbox flanged to the axle

Max. travel speeds		
	1st gear:	6.0 km/h
	2nd gear:	13.0 km/h
	3rd gear:	20.0 km/h
Gradability		16 %
Max. working speeds		
	1st gear:	2.0 km/h
	2nd gear:	4.0 km/h
	3rd gear:	7.0 km/h
Tyres		
Dual tyres, with spacers		10.00 x 20
Ground clearance		360 mm

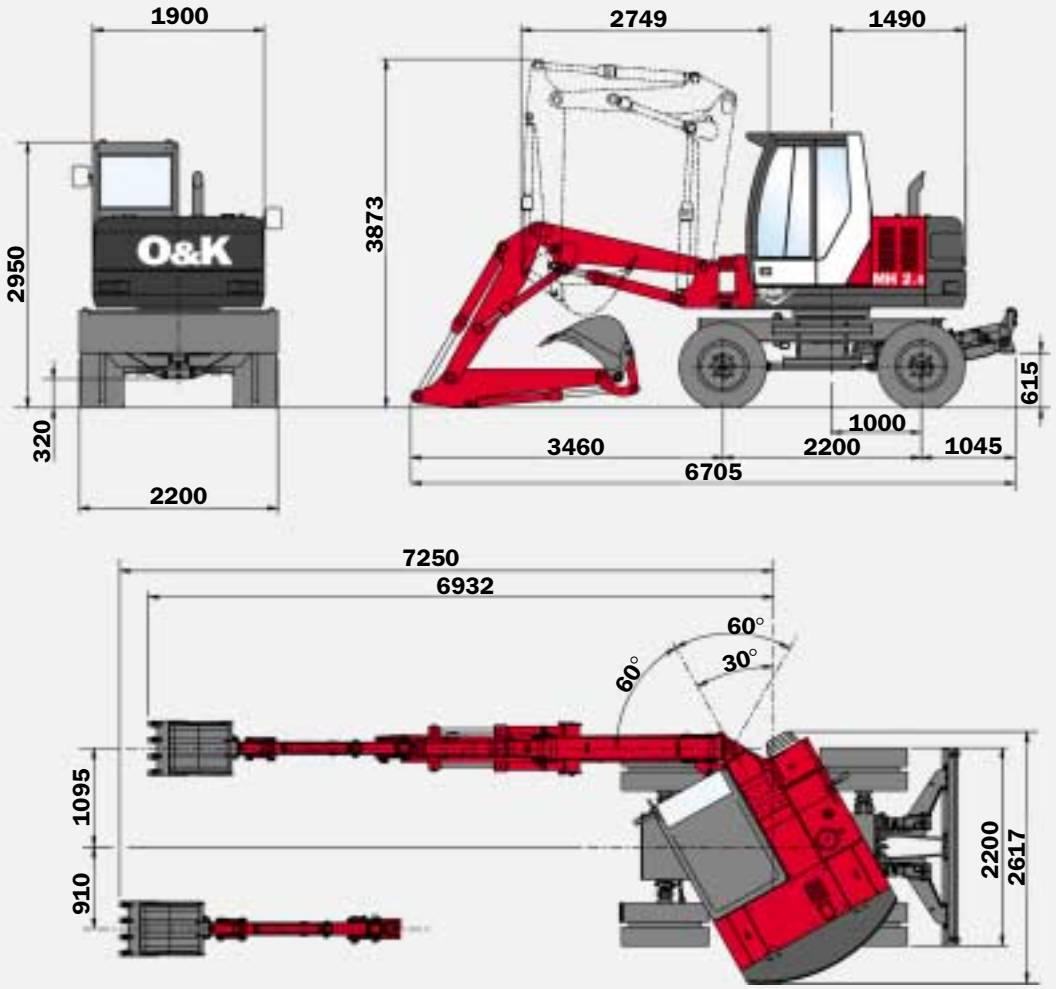
Capacities

Fuel tank	211 l
Coolant	21.5 l
Engine oil	8.5 l
Swing gear	3.0 l
Hydraulic system	160 l
Axles (total)	20 l

Options

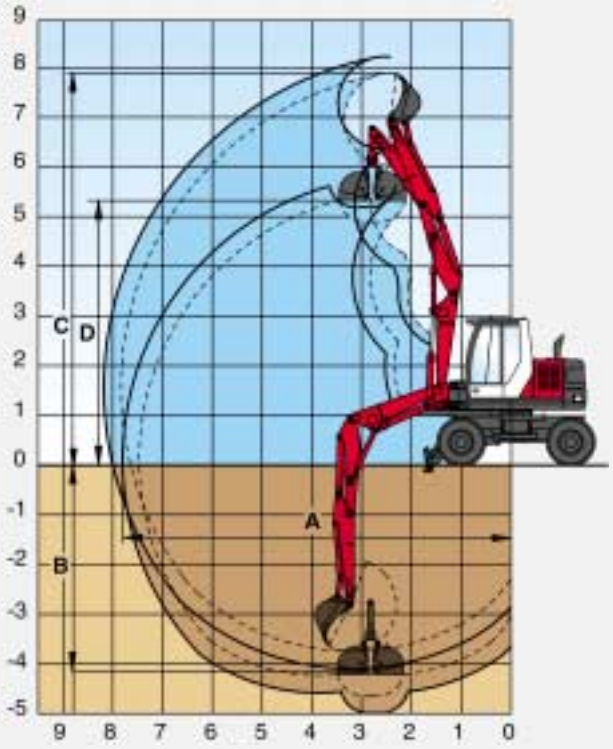
A/C • Backhoes from 350 mm to 1000 mm • Sticks 2000 mm and 2350 mm • Rear stabilizers • Front and rear stabilizers • Single tyres 600/40-22.5 • Anti-burst device on the boom and stick cylinders • Hydraulics for hammer/scrap cutter

Dimensions and weights: MH 2.5, with adjustable boom



Service weights*		
MH 2.5 PLA	**MH 2.5 A2**	**MH 2.5 PLA/A2**
9040 kg	8890 kg	9390 kg

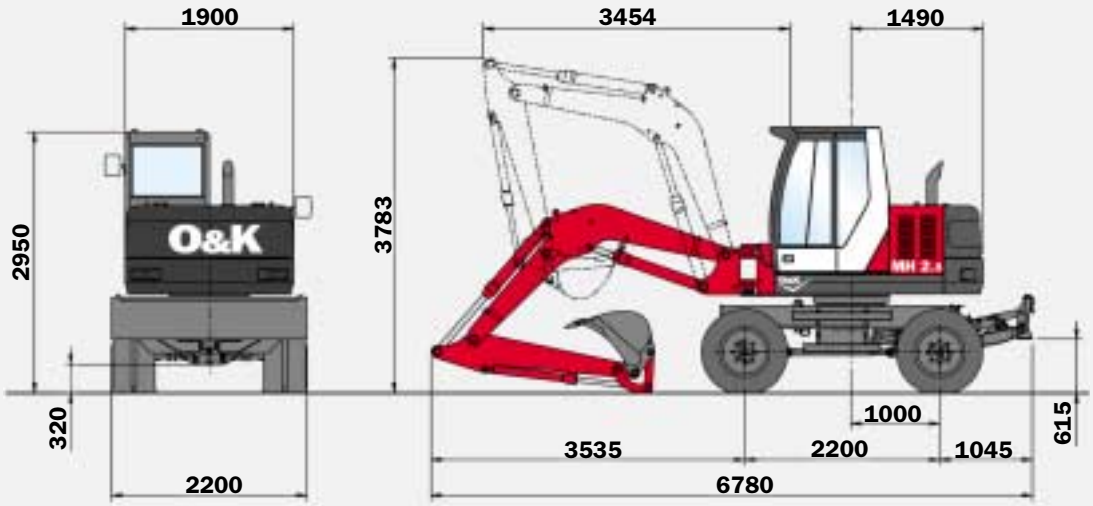
*Bucket stick 1850 mm, backhoe 600 mm, dual tyres, full tank, operator

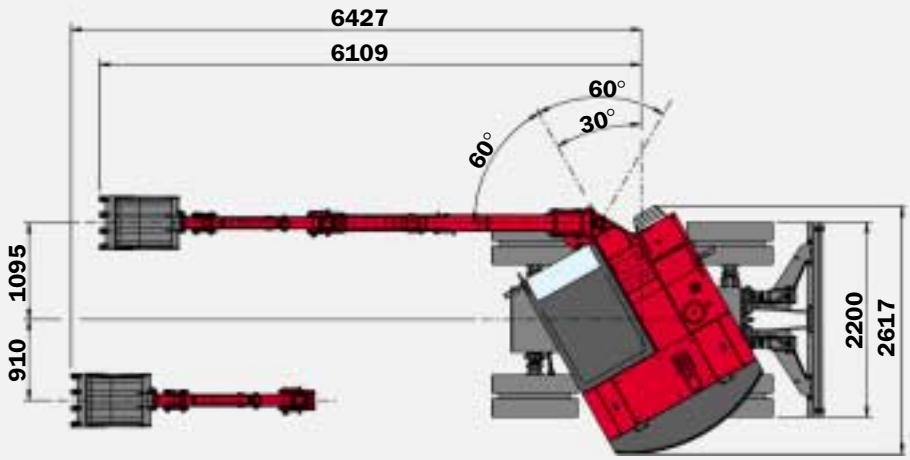


Digging specs.					
		With backhoe		With clamshell**	
Stick	**mm**	**1850**	**2200**	**1850**	**2200**
Max. reach		7840	8190	7450	7800
A Reach, ground level		7650	8000	–	–
B Digging depth		3750	4100	4650	5000
Vertical digging depth		3585	3950	–	–
C Cutting height		7895	8225	–	–
D Dump height		6030	6355	4895	5125
Front slew radius*		3240	3465	–	–
Digging forces	**kN**				
Breakout force		54	54	–	–
Ripping force		44	39	–	–

* with straight boom ** depending on type of clamshell

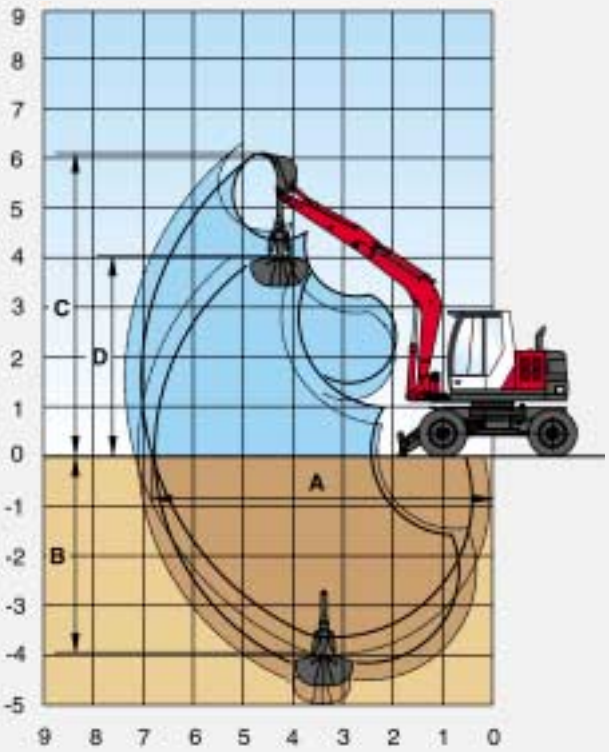
Dimensions and weights: MH 2.5, with monoboom





Service weights*		
MH 2.5 PLA	**MH 2.5 A2**	**MH 2.5 PLA/A2**
8860 kg	8710 kg	9210 kg

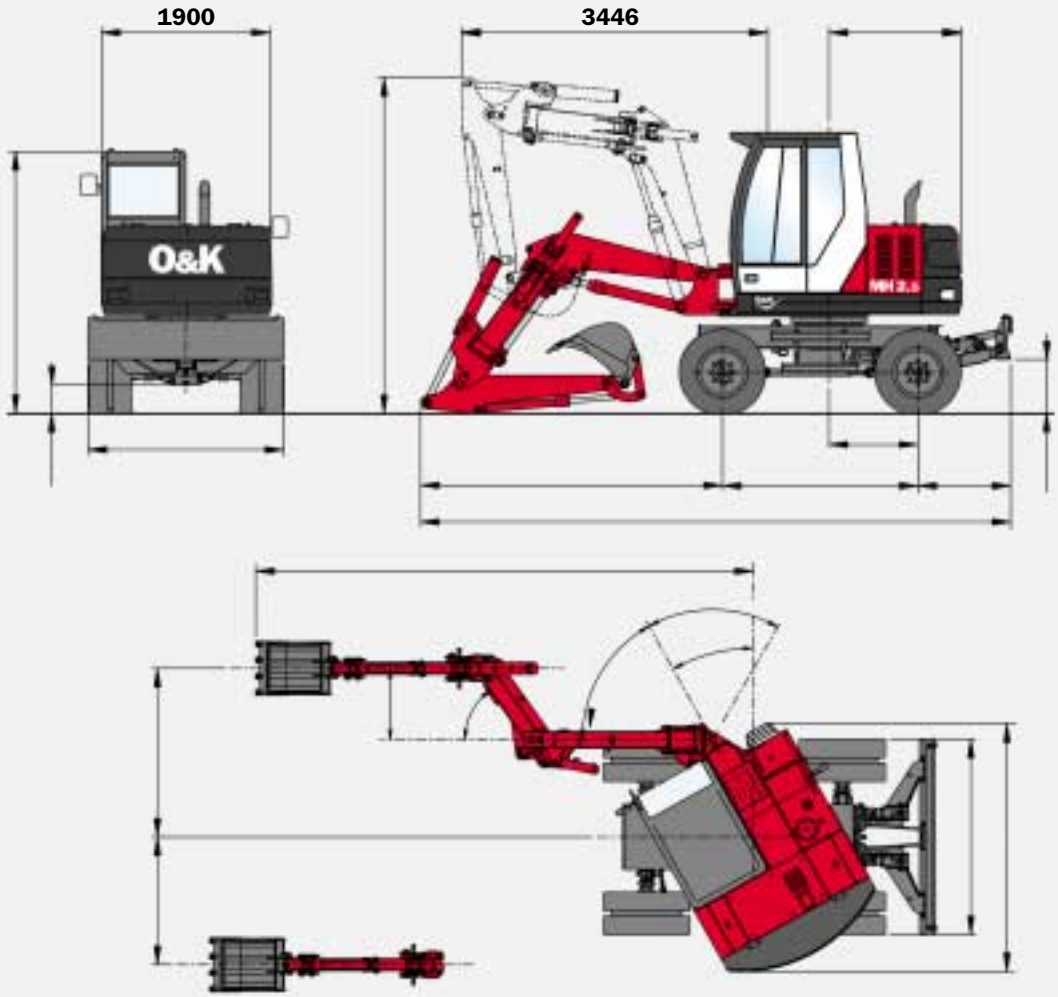
*Bucket stick 1850 mm, backhoe 600 mm, dual tyres, full tank, operator



Digging specs.					
		With backhoe		With clamshell**	
Stick	**mm**	**1850**	**2200**	**1850**	**2200**
Max. reach		7040	7385	6770	7100
A Reach, ground level		6815	7160	–	–
B Digging depth		3635	3985	4570	4920
Vertical digging depth		3280	3670	–	–
C Cutting height		6110	8225	–	–
D Dump height		4340	4540	3400	3595
Front slew radius*		3090	3115	–	–
Digging forces	**kN**				
Breakout force		54	54	–	–
Ripping force		44	39	–	–

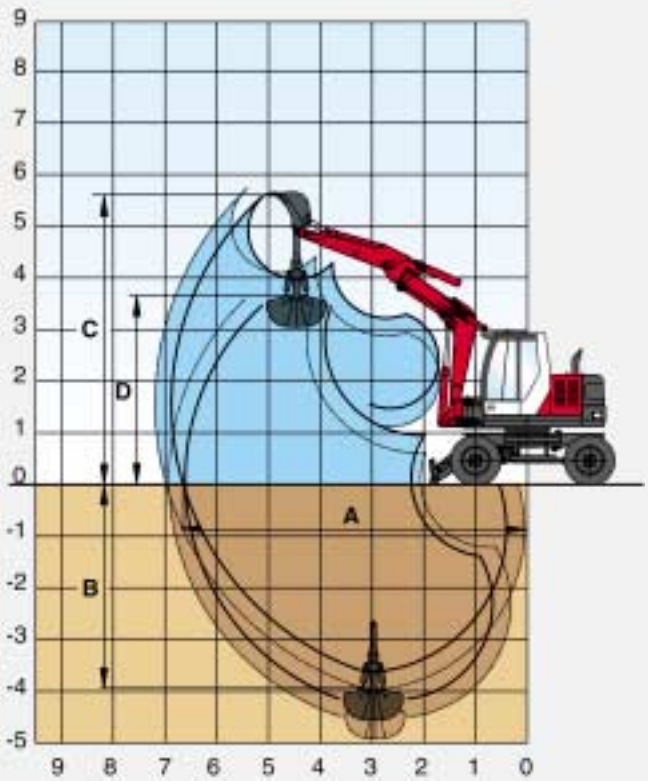
* with straight boom ** depending on type of clamshell

Dimensions and weights: MH 2.5, with offsetting boom



Service weights*		
MH 2.5 PLA	**MH 2.5 A2**	**MH 2.5 PLA/A2**
9110 kg	8960 kg	9460 kg

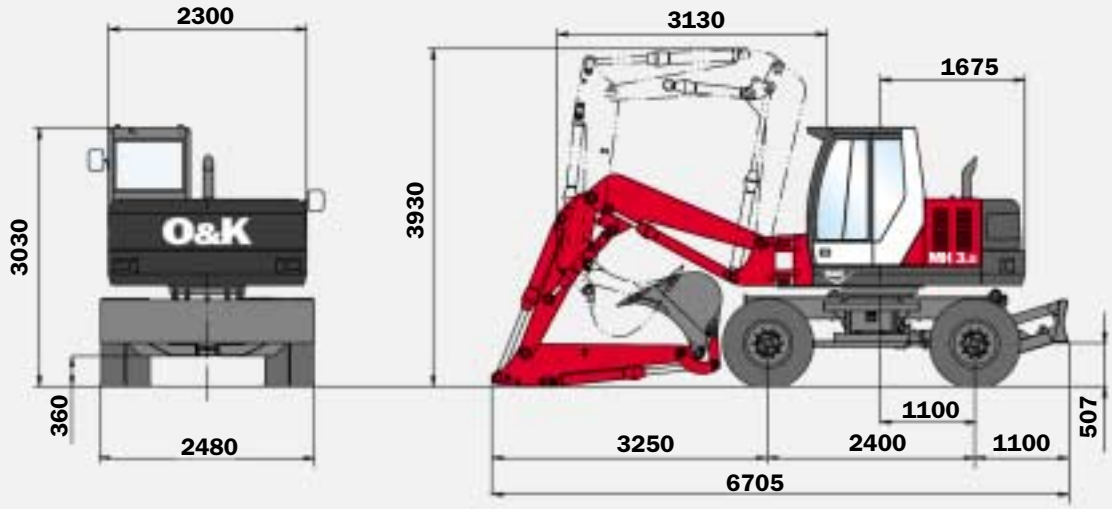
*Bucket stick 1850 mm, backhoe 600 mm, dual tyres, full tank, operator

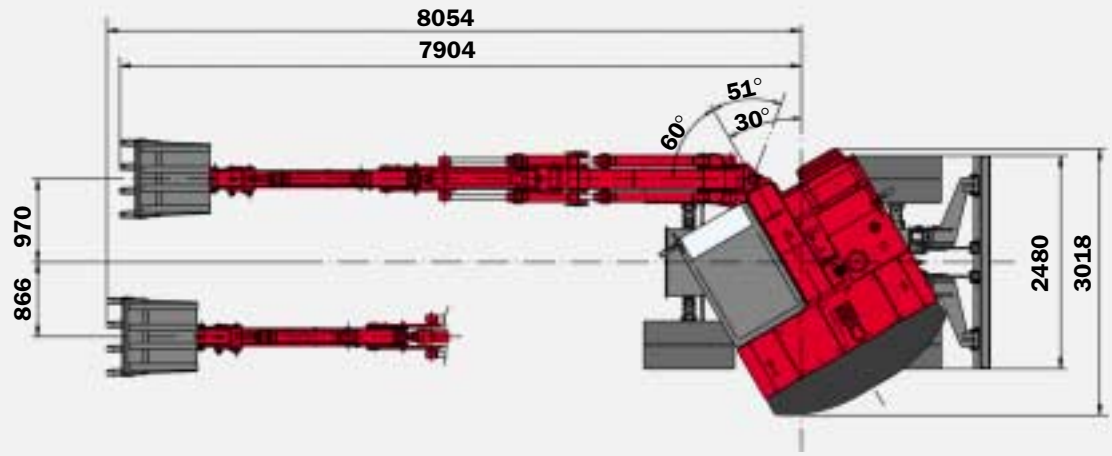


Digging specs.			
		With backhoe	
Stick	**mm**	**1850**	**2200**
Max. reach		6875	7215
A Reach, ground level		6650	6990
B Digging depth		3625	3975
Vertical digging depth		3190	3580
C Cutting height		5600	5760
D Dump height		3980	3780
Front slew radius*		3070	3070
Digging forces*	**kN**		
Breakout force		54	54
Ripping force		44	39

* with straight boom

Dimensions and weights: MH 3.5, with adjustable boom



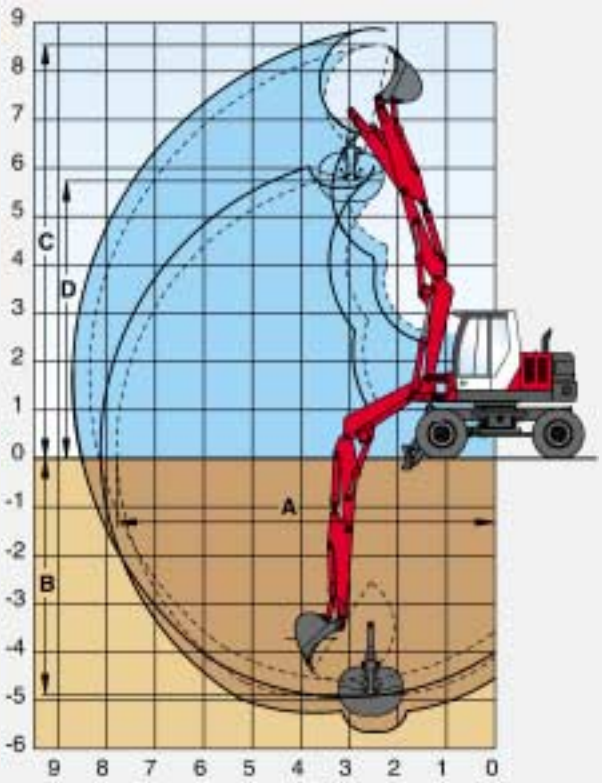


Service weights*		
MH 3.5 PLA	**MH 3.5 A2**	**MH 3.5 PLA/A2**
11730 kg	115300 kg	122300 kg

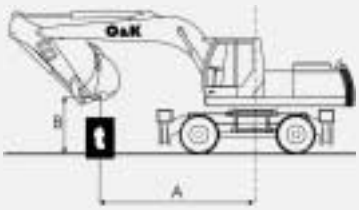
*Bucket stick 1850 mm, backhoe 600 mm, dual tyres, full tank, operator

Digging specs.					
		With backhoe		With clamshell**	
Stick	**mm**	**2000**	**2350**	**2000**	**2350**
Max. reach		8400	8700	7795	8130
A Reach, ground level		8155	8510	–	–
B Digging depth		4585	4935	5310	5650
Vertical digging depth		4435	4795	–	–
C Cutting height		8545	8880	–	–
D Dump height		6375	6710	5305	5595
Front slew radius*		3610	3865	–	–
Digging forces	**kN**				
Breakout force		79	79	–	–
Ripping force		49.5	44.5	–	–

* with straight boom ** depending on type of clamshell



Lifting capacities: MH 2.5



Schematic

As per ISO 10567, the values stated amount to 75% of the static tipping load or 87% of the hydraulic lift force. Power boost switched on.

a Longitudinal
b Transverse
*** Limited by the hydraulics**

Adjustable boom

		MH 2.5 PLA and MH 2.5 A2, stick 1850										MH 2.5 PLA and MH 2.5 A2, stick 2200									
	A	1.5 m		3.0 m		4.5 m		6.0 m		max.		1.5 m		3.0 m		4.5 m		6.0 m		max.	
Sticks	B	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
	6.0 m					2.36*	1.53*			2.36*	1.43*					2.10*	1.57*			2.03*	1.21*
	4.5 m					2.21*	1.55*	1.89*	0.97*	1.89*	0.95*					2.04*	1.58*	1.77*	0.99*	1.64*	0.86*
	3.0 m					2.56*	1.46*	1.90*	0.96*	1.70*	0.79*					2.41*	1.49*	1.83*	0.96*	1.53*	0.73*
	1.5 m			3.42*	2.72*	2.92*	1.34*	1.97*	0.91*	1.55*	0.75*			2.52*	2.52*	2.85*	1.35*	1.94*	0.91*	1.45*	0.69*
0 m	Ground level			4.53*	2.30*	2.77*	1.28*	1.82*	0.89*	1.37*	0.78*			4.49*	2.29*	2.85*	1.27*	1.88*	0.87*	1.30*	0.71*
	-1.5 m			2.56*	2.31*	2.02*	1.29*			1.02*	0.91*			3.24*	2.27*	2.24*	1.26*	1.38*	0.88*	1.02*	0.82*
	-2.5 m			3.20*	2.39*					1.92*	1.49*			2.87*	2.34*	1.42*	1.30*			1.16*	0.76*
	-3.0 m													2.88*	2.39*					1.81*	1.58*

Mono boom

		MH 2.5 PLA and MH 2.5 A2, stick 1850										MH 2.5 PLA and MH 2.5 A2, stick 2200									
	A	1.5 m		3.0 m		4.5 m		6.0 m		max.		1.5 m		3.0 m		4.5 m		6.0 m		max.	
Sticks	B	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
	6.0 m					2.36*	153*			2.36*	1.43*										
	4.5 m					1.98*	1.55*			2.02*	1.50*					1.71*	1.60*			1.64*	1.35*
	3.0 m					1.90*	1.64*			1.76*	1.14*					1.64*	1.64*			1.46*	1.06*
	1.5 m					2.09*	1.36*			1.80*	1.05*					1.84*	1.37*	1.69*	0.99*	1.49*	0.98*
0 m	Ground level			2.29*	1.26*	2.56*	1.23*			2.12*	1.11*			2.00*	1.25*	2.33*	1.16*			1.72*	1.03*
	-1.5 m			3.41*	1.79*					2.36*	1.46*			3.20*	1.56*	2.69*	1.43*			2.23*	1.30*
	-2.5 m													3.10*	2.62*					2.12*	1.91*
	-3.0 m																				

Lifting capacities: MH 3.5

Adjustable boom

MH 3.5, stick 2000

Sticks B	A	3.0 m a	3.0 m b	4.5 m a	4.5 m b	6.0 m a	6.0 m b	7.0 m a	7.0 m b	max. a	max. b
7.0 m	PLA or A2										
	PLA/A2										
6.0 m	PLA or A2			3.78*	2.52*					3.69*	1.84*
	PLA/A2			3.78*	2.64*					3.69*	1.93*
4.5 m	PLA or A2			3.50*	2.50*	3.32*	1.55*			2.97*	1.32*
	PLA/A2			3.50*	2.62*	3.32*	1.63*			2.97*	1.39*
3.0 m	PLA or A2			4.67*	2.32*	3.51*	1.50*			2.74*	1.13*
	PLA/A2			4.67*	2.45*	3.51*	1.58*			2.74*	1.20*
1.5 m	PLA or A2	5.28*	4.58*	5.34*	2.26*	3.55	1.42			2.64	1.08
	PLA/A2	5.28*		4.73*	2.38*	3.74*	1.50*			2.74*	1.14*
0 m Ground level	PLA or A2	4.32*	3.75*	5.44*	2.01*	3.49	1.37			2.58*	1.12*
	PLA/A2	4.32*	4.00*	5.44*	2.13*	3.56*	1.45*			2.58*	1.19*
-1.5 m	PLA or A2	4.68*	3.75*	4.37*	2.02*	2.76*	1.38*			2.11*	1.31*
	PLA/A2	4.68*	4.00*	4.37*	2.13*	2.76*	1.46*			2.11*	1.38*
-2.5 m	PLA or A2										
	PLA/A2										
-3.0 m	PLA or A2	3.71*	3.95*	1.73*	1.73*					0.97*	0.97*
	PLA/A2	3.71*	3.95*	1.73*	1.73*					0.97*	0.97*

MH 3.5, stick 2350

Sticks B	A	3.0 m a	3.0 m b	4.5 m a	4.5 m b	6.0 m a	6.0 m b	7.0 m a	7.0 m b	max. a	max. b
7.0 m	PLA or A2									5.38*	3.57*
	PLA/A2									5.38*	3.76*
6.0 m	PLA or A2			3.39*	2.56*					2.96*	1.59*
	PLA/A2			3.39*	2.69*					2.96*	1.67*
4.5 m	PLA or A2			2.76*	2.54*	3.12*	1.57*			2.47*	1.20*
	PLA/A2			2.76*	2.66*	3.12*	1.65*			2.47*	1.26*
3.0 m	PLA or A2			3.46*	2.36*	3.36*	1.51*			2.30*	1.04*
	PLA/A2			3.46*	2.48*	3.36*	1.59*			2.30*	1.10*
1.5 m	PLA or A2			4.38*	2.28*	3.55	1.42	2.50	1.01	2.29*	0.99*
	PLA/A2			4.38*	2.40*	3.66*	1.50*	2.75*	1.07*	2.29*	1.05*
0 m Ground level	PLA or A2	4.29*	3.73*	5.52*	1.99*	3.47	1.35			2.44*	1.03*
	PLA/A2	4.29*	3.98*	5.52*	2.11*	3.69*	1.43*			2.44*	1.09*
-1.5 m	PLA or A2	4.06*	3.66*	4.69*	1.97*	3.09*	1.34*			2.05*	1.18*
	PLA/A2	4.06*	3.91*	4.69*	2.09*	3.09*	1.42*			2.05*	1.24*
-2.5 m	PLA or A2										
	PLA/A2										
-3.0 m	PLA or A2	3.50*	3.50*	2.59*	2.06*					1.09*	1.09*
	PLA/A2	3.50*	3.50*	2.59*	2.18*					1.09*	1.09*

Digging buckets

“Quite frankly, I'm amazed at the performance of this relatively small machine. It's really great value for money. And servicing – no problem! Completed in no time at all. It's so easy to reach all of the components”

Backhoe MH 2.5

Bucket cty (SAE) (m^3)	Width (mm)	Weight with teeth (kg)
0.050	280	78
0.075	350	85
0.145	450	128
0.181	600	137
0.217	700	147
0.290	800	163

Backhoe MH 3.5

Bucket cty (SAE) (m^3)	Width (mm)	Weight with teeth (kg)
0.200	350	153
0.295	500	171
0.385	650	197
0.470	800	226
0.530	900	241
0.590	1000	258

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