

Hydraulic Crawler Excavator Specifications

RH city



Service weight 15.5 t – 16.5 t
Engine output 61 kW
Bucket capacities up to 1.1 m³
(SAE)

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

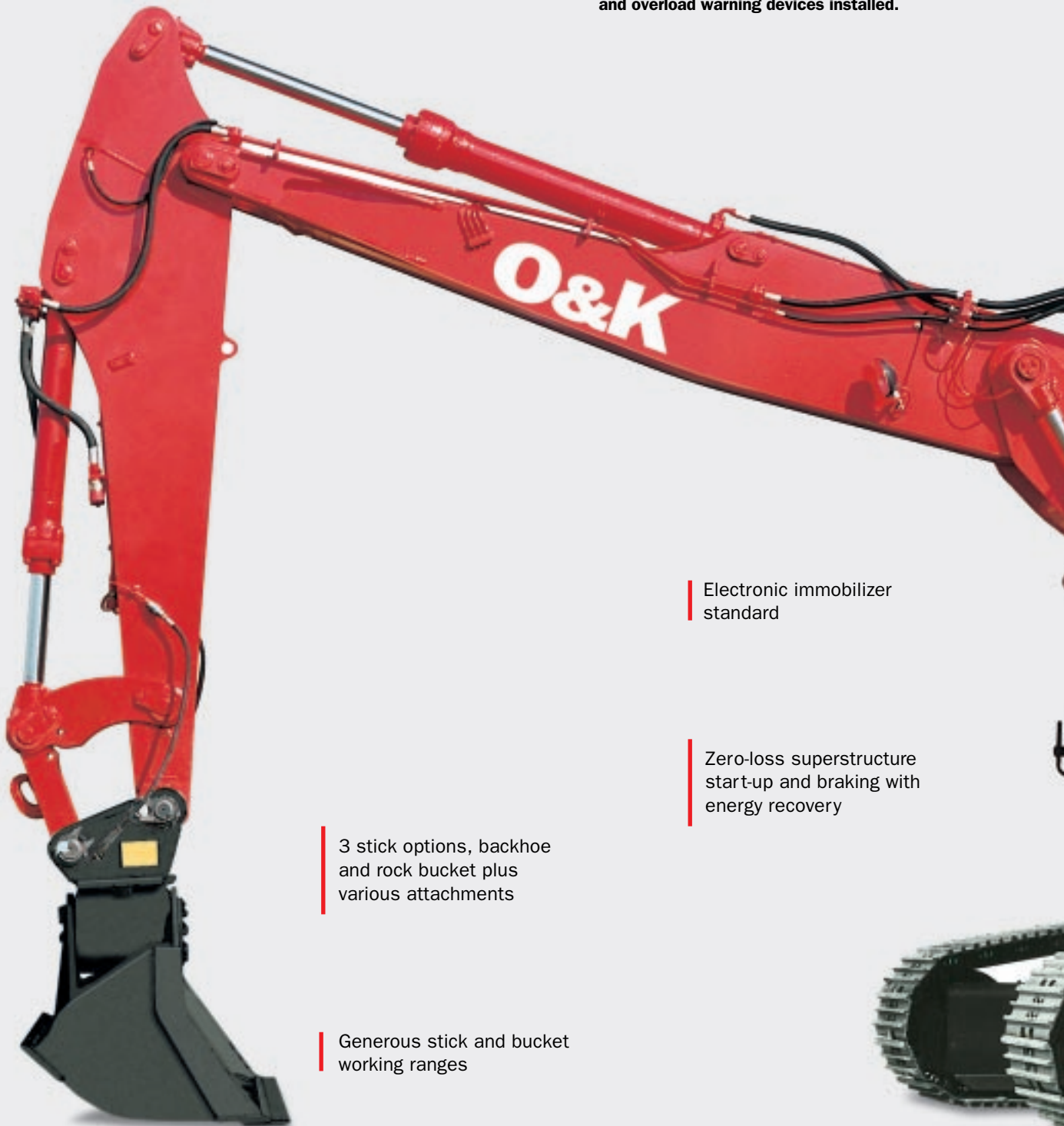




CE symbol according to EC Machinery Directive.

**TÜV certificate for compliance with
DIN ISO EN 9001.**

**Lifting gear operation permitted with anti-burst
and overload warning devices installed.**

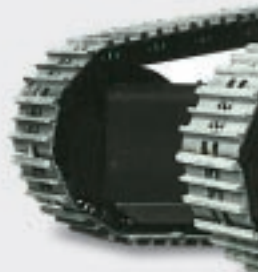


Electronic immobilizer
standard

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

3 stick options, backhoe
and rock bucket plus
various attachments

Generous stick and bucket
working ranges



RH city – sized for city productivity.

Quick, sprightly and very quiet – attributes that make the compact RH city the perfect candidate for working in towns and wherever space is tight. Innovative excavator features and excellent controllability ensure extended availability and remarkable ROI.

O&K engineering at its finest: PMS III, the consistent development of the proven control system, uses state-of-the-art semiconductor technology to maximize engine and pump functions. The outcome: significantly improved utilization of available power, less wear and lower fuel consumption. What's more, the PMS three-circuit hydraulic system permits faster, brisker workcycles.



Ultramodern cab in softline design with ample space for the operator

Electronic engine and pump management system PMS III

Powerful O&K diesel engine, water-cooled and clean

Fuel savings through freely selectable engine speeds

Encapsulated ball-bearing swing ring with lifetime lubrication

Diagonal undercarriage with outstanding lift capacity

O&K track cleaning and guide system (optional)

Final drives protected within the crawler profile



PMS III: Engine and pumps controlled to perfection.

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!

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 at the control panel. The immobilizing function is overridden by pressing the 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

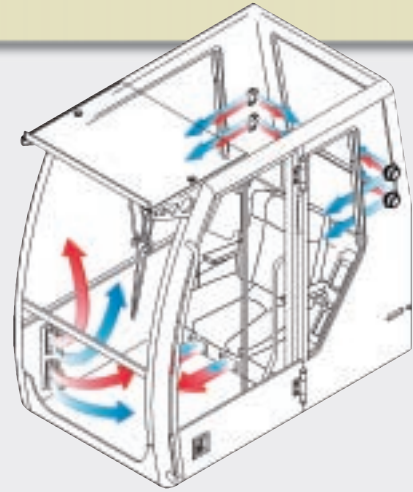
Power under control; O&K has many examples to illustrate this: alongside variable flow, prioritized ECO output level and rev-lowering under zero-load conditions. Plus the closed swing circuit preventing unnecessary hydraulic heat build-up when swinging or braking the superstructure. Hence, less need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



Pressure and volume – on demand at any time

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.

A cab that encourages productivity



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

The ultramodern cab on the RH city 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 into place. The lower part is completely removable 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 transparent plexiglass 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 help 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.

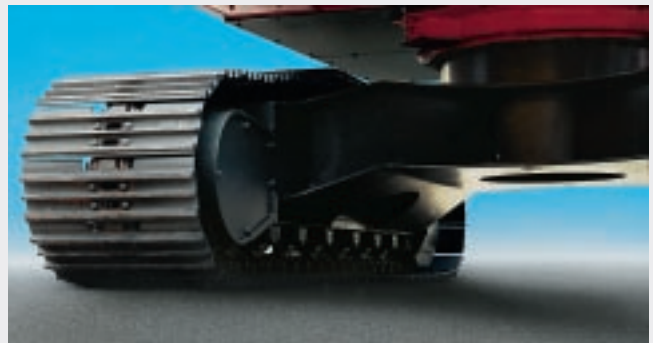
Remarkable: tractive force, stability and lift capacity

The RH city is remarkable for its exceptional tractive force, excellent stability and outstanding lift capacity. Such impressive performance specs are due to the rugged undercarriage and the overall balance of the entire unit. Ample ground clearance and powerful tractive forces are additional features, thus enabling extraordinary productivity even under punishing conditions and on tricky terrain.



Low-maintenance undercarriage

The oversized crawlers with track tensioning and sealed chain link bearings as well as the entire undercarriage need very little maintenance, the track and support rollers none at all.



Drive and gear units safely protected

The compact gear units, drive units and hydraulic lines are fully protected within the crawler profile, thus safeguarded against damage from rock and debris.



Automatic track cleaning

The patented track cleaning and guide system (optional) is an effective safeguard against dirt accumulating. While the unit is travelling, the tracks are automatically cleaned. The wedge shape of the cleaning shoe dislodges the dirt sideways out of the tracks, preventing build-up at the idlers and sprockets. Track wear is significantly reduced, the track tensioning system has less work to do and the tracks are prevented from slipping off.



Powerful, water-cooled O&K engine

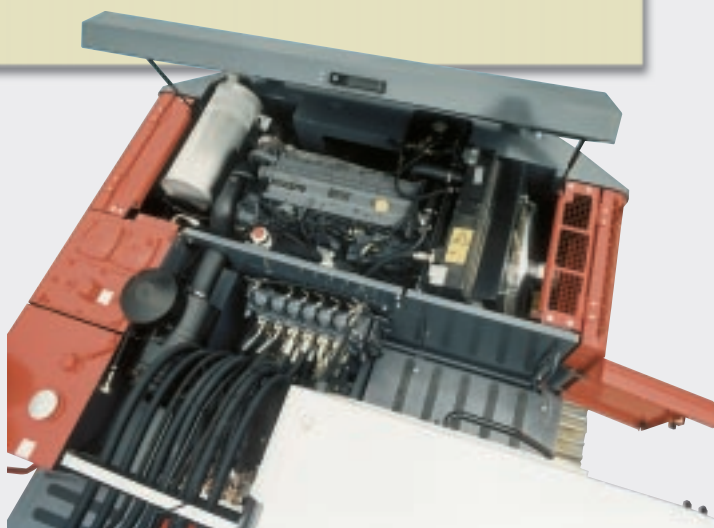


The powerful diesel engine gives the RH city its enormous forces fully translated into ample hydraulic power by the exceptional efficiency of the PMS III Pump Managing System. Despite such muscle, the engine is extremely fuel efficient. It is also economical in terms of emissions, with low noise and exhaust levels. The engine complies with COM I.

Service-friendly design

Easy access to the engine and all the components shortens maintenance time and boosts productivity. All the service points are easily and safely 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.

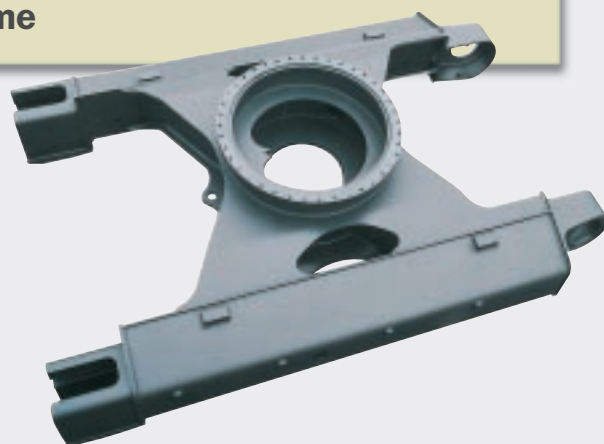


Separate cooling circuit



A separate cooling circuit assures lower oil temperatures. The fan speed is thermally regulated for less heat and improved longevity on the pumps and hydraulic components.

Frame



The rugged torsionally-stiff frame is of box design and laser welded, a technology for absolute precision and a long service life.



Engine

Deutz diesel engine	BF 4M 1012
Water cooled • Exhaust turbo charger • Integrated radiator for lube oil and coolant • Dry air filter with safety element and contamination indicator • Electric RPM regulation • Electric engine shut-off from key switch	
Engine output ISO 9249	61 kW / 2 300 RPM
Cylinders / displacement	4 / 3 200 cm ³
Bore / stroke	94 mm / 115 mm
Voltage	24 V
2 batteries	each 90 Ah
Generator	35 A
Starter	4 kW

Exhaust emissions comply with current legislation



Hydraulics

PMS 3-pump system with two main pumps and separate swing pump • Main pumps each with individual control • Double flow • Parallel bucket circuits for 4 functions simultaneously • Micro-filtration of return oil, servo and swing circuits • Flow on demand • Hydraulic oil cooler with hydrostatic fan drive

Maximum delivery, main pumps	2 x 126 l/min
Maximum delivery, swing pump	64 l/min
Maximum pressure, w/o 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 engine rev return

3 selectable output levels:

	Drive	Heavy	Eco	Lift
RPM	2300	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 long-term lubrication

Effective slewing moment	35 kNm
Max. rpm	9.1 RPM



Cab

Tinted safety glass • Front top pane retracts, lower section removable • Sliding window in the door • Roof window • Rain-protecting 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 ISO recommendations • Individually adjustable side consoles • Ergonomic servo-controlled levers



Final drive

Hydraulic drive for each crawler • Stone guard for adjustable motor • Final drives and brake valves inside the crawler profile • Crawler brake • Idler-mounted track guard • Low-maintenance crawlers with track tensioning • Sealed chain link bearings • Lifetime lubricated track and support rollers.

Max. effective tractive force

LC undercarriage:	161 kN
N undercarriage:	161 kN

Max. travel speed 5 km/h

Track pads per crawler

LC undercarriage	50
N undercarriage	45



Capacities

Fuel tank	190 l
Cooling system	9.3 l
Engine oil, including filter	9.25 l
Slewing gear	3.5 l
Hydraulic tank	170 l
Hydraulic system	260 l

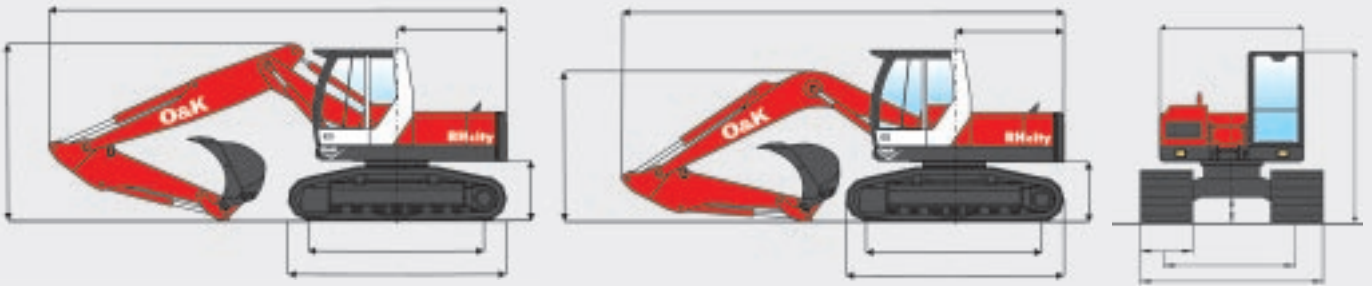
Equipment

Low maintenance through hardened and corrosion-proofed bearing pins, low-wear bushings, sealed bearings and easy accessible grease distributor for boom • Hydraulic cylinders with self-aligning bearings at both ends • Hydraulic switchover valve on bucket cylinders • Spotlight mounted on boom

Options

Air conditioning • Eco-friendly hydraulic oil • Auxiliary heating • Anti-burst and overload warning units • Additional head lamps • Electric refuelling unit • Mid-mounted track guide • Hydraulic grab rotation • Pressure and power booster • Cold start device • TCG track guide and cleaning shoe • Stone guard • Delux cab • Fittings for radio/cassette recorder

Dimensions and weights



Slewing radius: 2090 mm

	A	B	C	D	E	F	G	H
RHcity N 500	500	2495	1996	414	2950	3675	1085	2970
RHcity N 600	600	2595	1996	414	2950	3675	1085	2970
RHcity N 700	700	2695	1996	414	2950	3675	1085	2970
RHcity LC 500	500	2740	2240	454	3375	4130	1090	2975
RHcity LC 600	600	2840	2240	454	3375	4130	1090	2975
RHcity LC 700	700	2940	2240	454	3375	4130	1090	2975
RHcity LC 850	850	3090	2240	454	3375	4130	1090	2975

Transport dimensions, adjustable boom		
Sticks	L	H
1,7 m	6200	2600
2,5 m	6200	2750
2,9 m	6150	2900
3,5 m	6100*	3100*

Transport dimensions, monoboomb		
Sticks	L	H
1,7 m	5650	2750
2,5 m	5700	2950
2,9 m	5700	3100
3,5 m	5700*	3200*

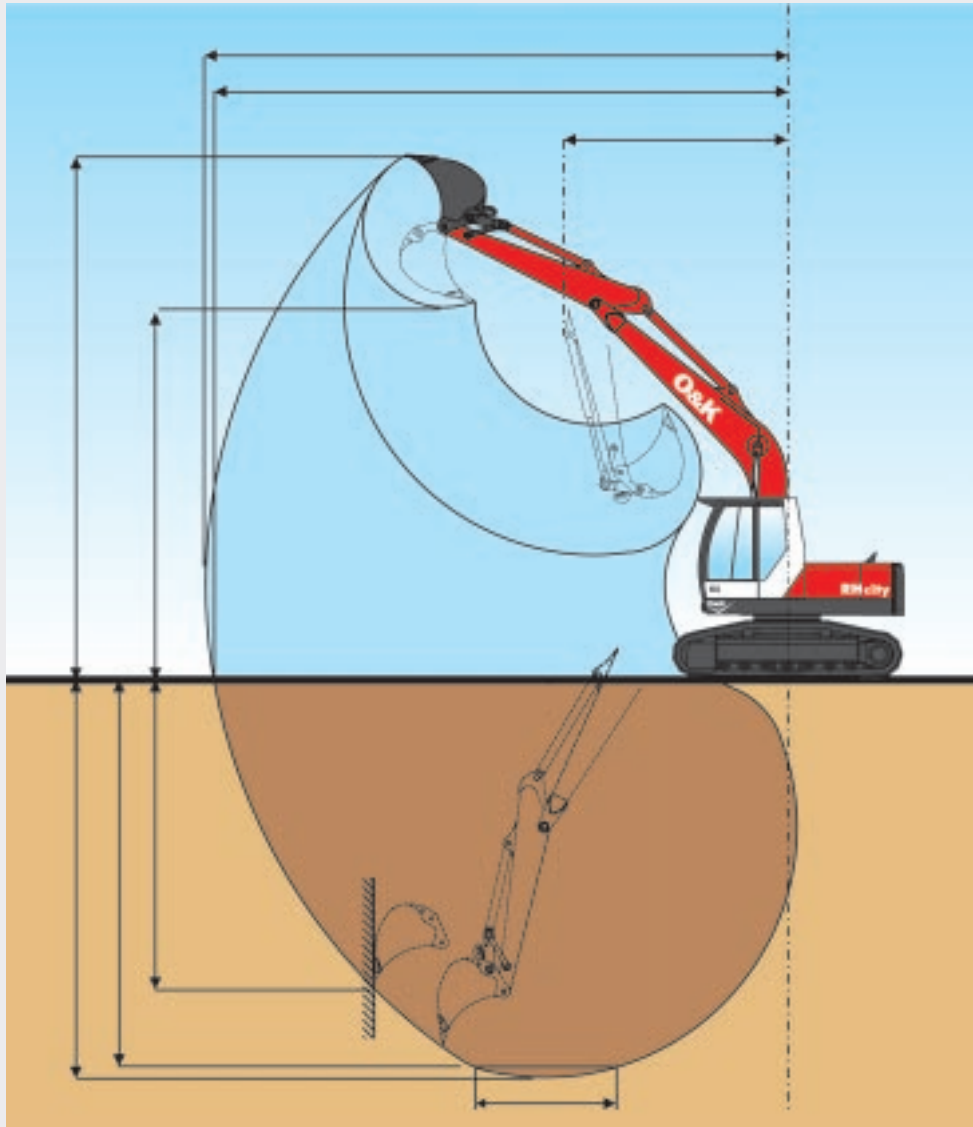
* excl. backhoe

	Weight ¹⁾	Weight ²⁾	Crawler track size	Track rollers	Upper rollers	kg/cm ² Ground pressure ¹	kg/cm ² Ground pressure ²
RHcity N 500	14.65	15.25	D4D/171 mm	8	2	0.49	0.51
RHcity N 600	14.90	15.50	D4D/171 mm	8	2	0.41	0.43
RHcity N 700	15.15	15.,75	D4D/171 mm	8	2	0.36	0.38
RHcity LC 500	15.00	15.60	D4D/171 mm	8	2	0.50	0.52
RHcity LC 600	15.25	15.85	D4D/171 mm	8	2	0.42	0.44
RHcity LC 700	15.50	16.10	D4D/171 mm	8	2	0.37	0.38
RHcity LC 850	15.75	16.35	D4D/171 mm	8	2	0.31	0.32

¹⁾ RH city with 4.6 m monoboomb, 2.5 m stick and trenching bucket (499 kg)

²⁾ RH city with 3.3 adjustable boom, 2.5 m stick and trenching bucket (499 kg)

Working range with backhoe and monoboam 4.6 m

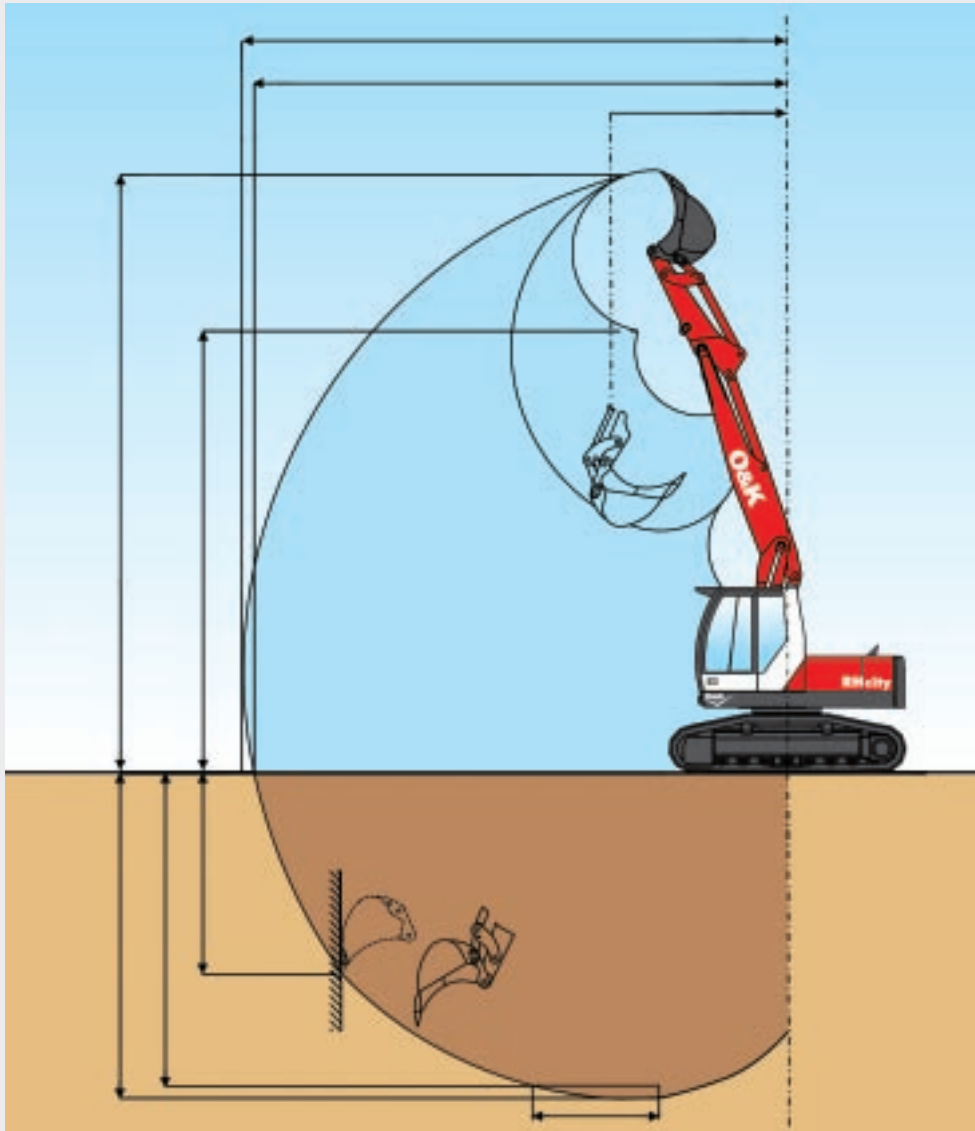


		Stick length	1.7 m	2.5 m	2.9 m	3.5 m
Range						
a	Maximum reach	m	7.8	8.5	8.9	9.5
b	Maximum reach at ground level	m	7.6	8.3	8.7	9.3
c	Maximum digging depth	m	4.6	5.4	5.8	6.4
d	Maximum penetration height	m	7.7	8.1	8.4	8.7
e	Maximum dump height	m	5.4	5.9	6.1	6.4
f	Maximum vertical digging depth	m	2.8	3.5	3.8	4.3
g	Minimum slew radius	m	3.2	3.2	3.2	3.2
h	Maximum digging depth with 2.4 m (8'') wide base	m	4.3	5.2	5.6	6.2

		Digging forces			
Stick		1.7 m	2.5 m	2.9 m	3.5 m
Breakout force	kN*	117	117	117	117
Ripping force	kN*	94	73	67	58

* with power boost

Working range with backhoe and adjustable boom 2.0/3.3 m

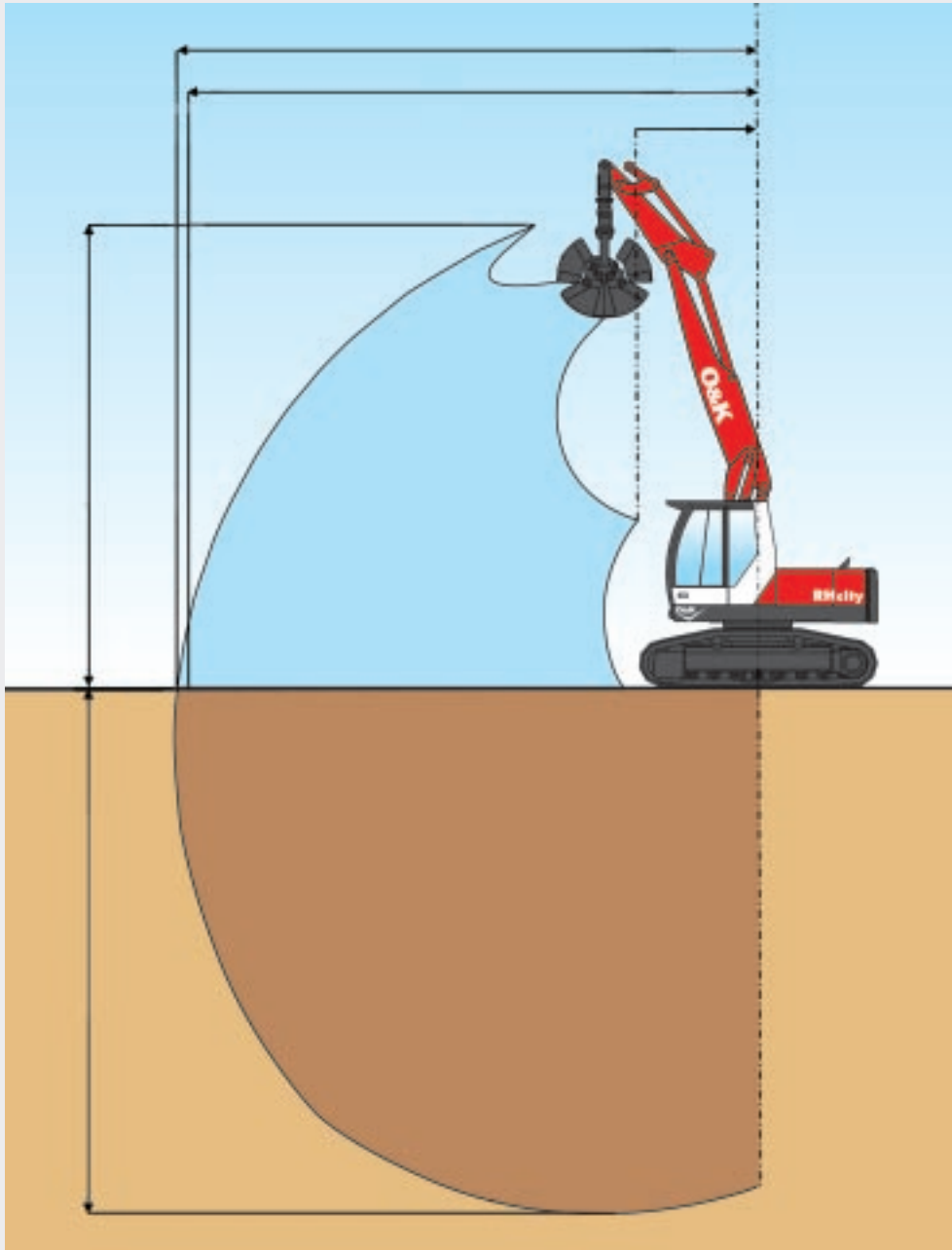


		Stick length	1.7 m	2.5 m	2.9 m	3.5 m
Range						
a	Maximum reach	m	8.4	9.2	9.6	10.2
b	Maximum reach at ground level	m	8.2	9.0	9.4	10.0
c	Maximum digging depth	m	4.9	5.7	6.1	6.7
d	Maximum penetration height	m	9.5	10.2	10.5	11.1
e	Maximum dump height	m	7.2	7.9	8.3	8.8
f	Maximum vertical digging depth	m	3.5	4.2	4.5	5.1
g	Minimum slew radius	m	2.25	2.6	2.8	3.1
h	Maximum digging depth with 2.4 m (8") wide base	m	4.8	5.6	6.0	6.6

		Digging forces			
Stick		1.7 m	2.5 m	2.9 m	3.5 m
Breakout force	kN*	117	117	117	117
Ripping force	kN*	94	73	67	58

* with power boost

Working range with grab and adjustable boom 2.0/3.3 m



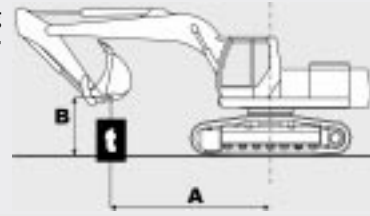
		Stick length	1.7 m	2.5 m	2.9 m	3.5 m
Range						
a	Maximum reach	m	7.2	8.0	8.4	9.0
b	Maximum reach at ground level	m	7.2	7.9	8.3	8.9
c	Maximum digging depth	m	6.1	6.9	7.3	7.9
d	Maximum height	m	5.9	6.6	7.0	7.5
e	Minimum slew radius	m	2.05	2.4	2.6	2.85

Grab		
Stick		1.7 m - 3.5 m
Closing force	kN	64.5

Lift capacities

Backhoe 0.35 m³; SAE

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



- a Total slewing range 360°
- b Longitudinal direction +/- 15°
- * Limited by hydraulic system

Sticks	RH City-N 600					Monoboomb		RH City-N 600					Adjustable boom								
	3.0 m		4.5 m		6.0 m		7.5 m		max.		3.0 m		4.5 m		6.0 m		7.5 m		max.		
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	
4.5 m		3.3		4.5*	1.9		3.1					6.4	7.4*	3.4	5.2	2.0	3.2				
3.0 m	5.7	9.1*	3.0	4.9	1.9	3.0						6.0	8.4*	3.3	5.0	2.0	3.2				
1.5 m		2.8	4.6	1.8		2.9						5.9	9.3*	3.3	4.9	1.9	3.1				
1.7 m Ground level	4.9	7.9*	2.6	4.4	1.7	2.8			1.5	2.4		5.7	9.9	3.0	5.0	1.8	2.9			1.1	2.0
1.5 m	4.9	9.2	2.6	4.4								5.5	10.0	2.8	4.7	1.6	2.8				
3.0 m	5.1	8.1*	2.7	4.5								5.3	9.8	2.6	4.5						
4.5 m				2.0	3.2							4.8*	4.8*	3.4	4.4*	2.1	3.2	1.2	2.1		
3.0 m		3.1	4.7*	1.9	3.0							6.1	8.3*	3.2	4.9	2.1	3.1	1.2	2.1		
1.5 m	5.2	9.5	2.8	4.6	1.7	2.9						5.8	8.8*	3.2	4.8	2.0	3.1	1.1	2.0		
2.5 m Ground level	4.8	8.2*	2.5	4.4	1.6	2.8			1.2	2.0		5.8	9.6	3.1	4.8	1.9	3.1	1.1	1.9	0.9	1.6
1.5 m	4.7	9.0	2.5	4.3	1.6	2.7						5.4	9.9	2.9	4.8	1.7	2.8	1.0	1.9		
3.0 m	4.8	9.1	2.5	4.3								5.3	9.8	2.6	4.5	1.5	2.7				
4.5 m				2.0	3.1*									3.4	4.0*	2.1	3.2	1.3	2.1		
3.0 m		3.2	4.2*	1.9	3.1	1.2	2.0					6.1	7.9*	3.3	5.0	2.1	3.1	1.3	2.1		
1.5 m	5.3	9.6*	2.8	4.7	1.8	2.9	1.2	2.0				5.9	9.0*	3.1	4.8	2.0	3.1	1.2	2.1		
2.9 m Ground level	4.8	8.6	2.6	4.4	1.6	2.8	1.1	1.9	1.0	1.8*		5.8	9.5	3.1	4.8	1.9	3.1	1.1	2.0	0.8	1.5
1.5 m	4.7	9.0	2.4	4.3	1.6	2.7						5.5	9.7	2.9	4.8	1.7	2.9	1.0	1.9		
3.0 m	4.8	9.0	2.4	4.3	1.6	2.7						5.3	9.8	2.7	4.6	1.6	2.7				
4.5 m					1.3	2.1								3.2*	3.2*	2.1	3.1*	1.4	2.2		
3.0 m				2.0	3.1	1.2	2.1					4.7*	4.7*	3.3	4.5*	2.1	3.1	1.4	2.2		
1.5 m	5.6	8.0*	2.9	4.8	1.8	2.9	1.2	2.0				5.9	9.3*	3.1	4.8	2.0	3.1	1.3	2.1		
3.5 m Ground level	4.9	9.2	2.6	4.5	1.6	2.8	1.1	1.9	0.9	1.3*		5.7	9.4*	3.1	4.7	2.0	3.0	1.2	2.0	0.7	1.3*
1.5 m	4.6	8.9	2.4	4.3	1.5	2.7	1.0	1.9				5.6	9.5	2.9	4.8	1.8	3.0	1.1	1.9		
3.0 m	4.6	8.9	2.4	4.2	1.5	2.6						5.2	9.8	2.7	4.7	1.6	2.8	1.0	1.8		

Sticks	RH City-LC 600					Monoboomb		RH City-LC 600					Adjustable boom								
	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.		
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	
4.5 m		3.9		4.5*	2.4		3.4*					7.4*	7.4*	4.0	5.2*	2.4	4.0				
3.0 m	7.0	9.2*	3.7	5.6*	2.3	3.9						7.2	8.3*	3.9	6.2	2.4	4.0				
1.5 m		3.4	6.0	2.2		3.7						7.1	9.3*	3.8	6.1	2.3	4.0				
1.7 m Ground level	6.2	7.9*	3.2	5.8	2.1	3.7			1.8	3.1		7.1	11.3*	3.7	6.2	2.2	3.8			1.5	2.6
1.5 m	6.3	10.4*	3.2	5.8								6.8	11,*	3.5	6.2	2.1	3.7				
3.0 m	6.5	8.1*	3.3	5.4*								6.7	11.8*	3.3	6.0						
4.5 m				2.4	3.5							4.9*	4.9*	4.0	4.4*	2.5	3.7*	1.5	2.7		
3.0 m		3.8	4.7*	2.3	3.9							7.2	8.3*	3.8	5.5*	2.5	3.9	1.5	2.7		
1.5 m	6.5	9.7*	3.4	6.1	2.2	3.7						7.0	8.8*	3.7	6.0	2.5	3.8	1.5	2.6		
2.5 m Ground level	6.1	8.2*	3.2	5.8	2.0	3.6			1.5	2.2*		7.0	10.3*	3.7	6.0	2.3	3.9	1.4	2.5	1.2	2.1*
1.5 m	6.0	11.2*	3.1	5.7	2.0	3.5						6.8	11.5*	3.5	6.2	2.1	3.7	1.3	2.5		
3.0 m	6.,2	9.7*	3.1	5.7								6.7	11.9*	3.3	6.0	2.0	3.6				
4.5 m				2.5	3.1*									4.0	4.0*	2.5	3.5*	1.6	2.7		
3.0 m		3.8	4.2*	2.3	3.6*	1.5	2.6					7.4	7.9*	3.9	5.1*	2.5	3.8*	1.6	2.7		
1.5 m	6.7	9.6*	3.5	5.7*	2.2	3.8	1.5	2.6				7.1	9.0*	3.7	6.0	2.4	3.8	1.5	2.7		
2.9 m Ground level	6.1	8.6*	3.2	5.8	2.0	3.6	1.4	2.5	1.3	1.8*		7.0	9.9*	3.7	5.9	2.4	3.8	1.4	2.6	1.1	1.7*
1.5 m	6.,0	10.5*	3.1	5.7	2.0	3.5						6.9	11.3*	3.5	6.1	2.1	3.8	1.3	2.5		
3.0 m	6.1	10.3*	3.1	5.7	2.0	3.5						6.7	11.7*	3.4	6.1	2.0	3.6				
4.5 m				1.6	2.3*									3.2*	3.2*	2.5	3.1*	1.7	2.8		
3.0 m				2.4	3.2*	1.6	2.7					4.7*	4.7*	3.9	4.5*	2.5	3.6*	1.7	2.7		
1.5 m	7.0	8.0*	3.6	5.0*	2.2	3.,8	1.5	2.6				7.0	9.2*	3.7	5.7*	2.4	3.8	1.6	2.7		
3.5 m Ground level	6.2	9.8*	3.2	5.9	2.0	3.6	1.4	2.5	1.2	1.3*		6.9*	9.4*	3.6	5.9	2.4	3.8	1.5	2.6	0.9	1.3*
1.5 m	5.9	9.8*	3.1	5.6	1.9	3.5	1.3	2.4				7.0	10.7*	3.6	5.9	2.2	3.8	1.4	2.5		
3.0 m	5.9	10.9*	3.0	5.6	1.9	3.5						6.6	11.4*	3.4	6.,1	2.0	3.6	1.3	2.4		

As per EN 474/5, hydraulic excavators in lifting operations must be equipped with anti-burst valves at the lift cylinders and an overload warning device.

Attachments

Dimensions and weights



		Monoboam			Adjustable boom		Stick					
					Lower section	Top section						
System length	m	4.60			2.09	3.30	1.70	2.50	2.90	3.50		
Weight	kg	900			550	750	330	450	490	560		
Linkage	kg						130	130	130	130		
Cylinder	kg	217			236	217	117	117	117	117		

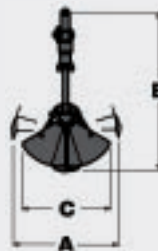
Buckets



		Rock backhoe					Backhoe					Trenching bucket Rigid/Swivelling +/- 45°		
Content (CECE)	m³	0.40	0.50	0.60	0.70	0.80	0.25	0.30	0.50	0.80	0.95	0.20	0.33	0.40
Content (SAE)	m³	0.50	0.60	0.70	0.80	0.90	0.28	0.35	0.60	0.90	1.10	0.25	0.40	0.50
Width	mm	750	850	1000	1100	1200	500	600	850	1200	1200	2000	2000	2000
Weight	kg	450	490	500	560	650	370	390	490	610	650	305	384	404

Clamshell bucket

Content (CECE)	m³	0.16	0.30	0.40
Width	mm	400	600	800
Weight	kg	700	550	595
A	m	1.45	1.45	1.45
B	m	2.48	2.40	2.40
C	m	1.43	1.35	1.35



O&K Orenstein & Koppel AG
 Staakener Str. 53-63
 D-13581 Berlin
 E-Mail: info@it.orenstein-koppel.com
<http://www.orenstein-koppel.de>