Hydraulic Crawler Excavator Specifications

RH plus

Service weight	**15.5 - 17.5 t**
Engine output	**71 kW**
Bucket capacities up to	**1.1 m³ (SAE)**

- **PMS three-pump hydraulics**
- **Electronic control and management system**
- **Noise-insulated deluxe cab**
- **Low noise and exhaust emissions**
- **Highly fuel efficient**

O&K

A plus in performance – one of the many benefits from O&K's RH plus

Outstanding precision controllability

Electronic immobilizer standard

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

Generous working ranges for stick and bucket

Four stick lengths, various buckets and attachments

CE symbol according to EC Machinery Directive.

TÜV certificate for compliance with DIN ISO EN 9001.

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

Ultramodern cab in softline design with ample space for the operator

Electronic engine and pump management system PMS III

Heat exchange through external water and oil coolers

Powerful Cummins diesel

Long life through low engine RPM

Rugged design engineered for construction machinery applications

Encapsulated ball-bearing swing ring with long-time lubrication

Final drives protected within the crawler profile

N or LC undercarriages for excellent lift capacity and punishing applications

Automatic up/down shifting

O&K track cleaning and guide system (optional)

Perfect engine and pump management system PMS III

The electronic PMS III manages engine and pump performance to unbeatable levels of comfort and efficiency; PMS III offers decisive application advantages:

- Highest productivity through the three performance levels “Lift“ (65 %), “Eco“ (88 %) and “Heavy“ (100 % of available power)
- Lift capacity amplification at the lift stage (optional).
- The component-friendly warm-up phase clearly increases the unit’s longevity.
- Function monitoring of all important components via optical and acoustic signals for reduced downtime. An instant fault code analysis within the display assists the important monitoring functions essential for increasing the unit’s longevity.
- The integrated service display reminds the operator of service intervals. Moreover, O&K after-sales service is able to trace the causes of a malfunction and take remedying action with the aid of the fault memory of the diagnostic system EDS.

Smart technology lowers operating costs

The high engine output is efficiently used for fuel savings: by precise variable flow control, the priority-controlled eco performance level and automatic rev reduction in no-load phases.

The plus in longevity: smart stroke dampening

The new end-of-stroke damping system with self-regulating throttle eliminates punishing piston impact. This protects the basic unit, reduces wear and increases durability.

The plus in application: adjustable slewing and braking forces

On O&K machines, the superstructure braking force is adjustable to what the customer wants. Operators may opt for either a soft or more aggressive swing-off/brake setting.

No energy losses through independent cooling circuit

The termostatically controlled hydraulic oil cooler – plus optimum cooling air intake, assures low oil temperatures for long cycle times of pump and hydraulic components. Another aspect of the high efficiency is the closed slewing circuit, preventing unnecessary oil heat-up, for clearly less cooling requirement.

The outcome: no energy losses, lower temperatures, longer service life of all components and noticeably reduced fuel consumption.

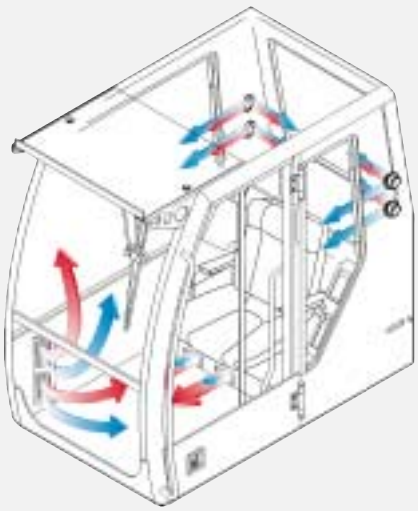
The plus in propulsion: rugged and efficient Cummins construction machinery engine

The clean, water-cooled Cummins engine with turbocharger operates at low revs for a long service life. Outstanding torque curves and low idling speed help to deliver power and cost efficiency. The PMS III electronic Pump Managing System fully exploits available engine power. Despite this, the engine is never overworked. Ongoing comparison of stored target data (e.g., temperature) with actual values provides automatic adjustment of pump performance in the event of any deviations.

The plus in maintenance: service-friendly design

Quick and easy access to all the service points and extended maintenance intervals are typical features of O&K crawler excavators. The panels open wide allowing comfortable access to all the components. A central display inside the cab reminds the operator of any checks or maintenance chores due.

The plus in comfort: the output-enhancing cab



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

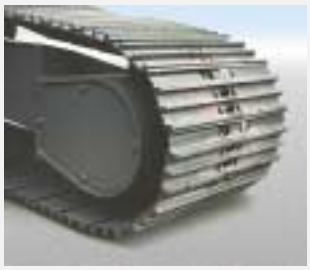
The new crawler excavator cab has even more space for the operator plus stowage area behind the seat. The rounded tinted windows of the futuristic softline design prevent glare. The completely restructured frame parts and large roof window improve upward visibility substantially. The front pane slides easily under the roof (a standard feature) where it locks safely into place. The 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. Air conditioning is optional.

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. Additional assets: the comfortable adjustable swing seat, the low noise level, and an extra-throughout ventilator providing slight overpressure within the cab.

The plus in practicality: 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.

The plus in convenience: automatic final drive



Final drive tractive force ensures brisk travel, even on treacherous terrain. Automatic up/downshift is load-related. The operator can opt between up/downshift and continuous first gear.

The plus in terrainability: stable, maintenance-free undercarriage

The compact gear units and drive motors are fully encapsulated and safely protected from damage. For any maintenance work, the guards are easily removed. 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.

Engine

Cummins diesel 4 BT 3.9 C
Water-cooled • Exhaust-gas turbocharger • Electric rev adjustment • Electric engine stop at key switch

Engine output ISO 9249	71 kW / 2200 RPM
Cylinders/displacement	4/3,900 cm^3
Bore/stroke	102 mm /120 mm
Voltage	24 V
2 batteries	12 V / 92 Ah each
Alternator	70 A
Starter	4.0 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 • Flow on demand • Double flow • Parallel bucket circuits for 4 functions simultaneously • Hydraulic oil cooler with hydrostatic fan drive • High-pressure lines with flanged fittings • Microfiltration of return oil, servo and swing circuits

Maximum delivery, main pumps	2 x 121 l/min
Maximum delivery, swing pump	88 l/min
Pressure without booster	max. 320 bar
Pressure with booster	max. 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

3 selectable output levels:

	Heavy	Eco	Lift
RPM	2200	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 • Adjustable slewing force • Encapsulated ball-bearing swing ring with lifetime lubrication

Effective slewing moment	35 kNm
Max. rpm	11

Cab

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

Drive

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

Max. effective tractive force	175 kN
Max. travel speed	5 km/h
Track pads per crawler, LC tracks	50
N tracks	45

Capacities

Fuel tank	250 l
Cooling system	18.5 l
Engine oil incl. filter	11.5 l
Slewing gear	3.5 l
Hydraulic tank	150 l
Hydraulic system	250 l

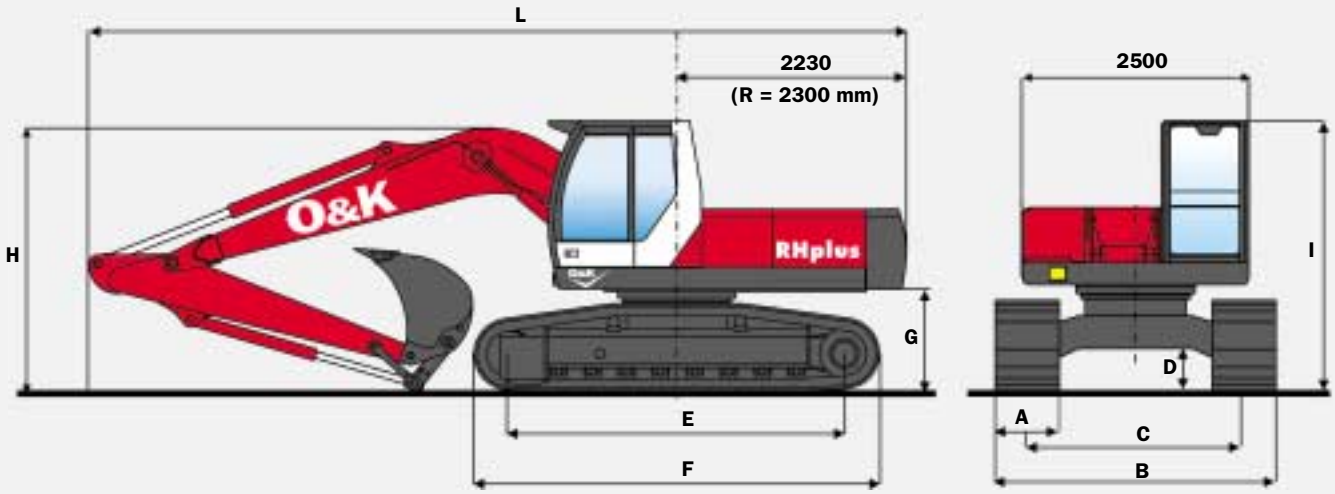
Attachments

Low maintenance through hardened and corrosion-proofed bearing pins, low-wear bushings, sealed bearings and easily accessible grease distributor for boom • Spotlight mounted on boom

Options

A/C • Eco-friendly hydraulic oil • Auxiliary heating • Refuelling unit
• Anti-burst and overload warning devices • Additional headlamp • Pressure booster with power boost operation • Mid-mounted track guide • TCG track guide and cleaning shoe • Stone guard • Deluxe cab • Fittings for radio/cassette recorder

Dimensions and weights



	A	B	C	D	E	F	G	I
RH plus N 500	500	2496	1996	393	3375	4130	1080	2970
RH plus N 600	600	2596	1996	393	3375	4130	1080	2970
RH plus N 700	700	2696	1996	393	3375	4130	1080	2970
RH plus LC 500	500	2740	2240	454	3375	4130	1100	2990
RH plus LC 600	600	2840	2240	454	3375	4130	1100	2990
RH plus LC 700	700	2940	2240	454	3375	4130	1100	2990

Transport dimensions, monoboom

Sticks	L	H
1,7 m	7850	2750
2,5 m	7850	2950
2,9 m	7900	3100
3,5 m	8000	3250*

Transport dimensions, adjustable boom

Sticks	L	H
1,7 m	8400	2550
2,5 m	8410	2700
2,9 m	8360	2850
3,5 m	8280*	3050*

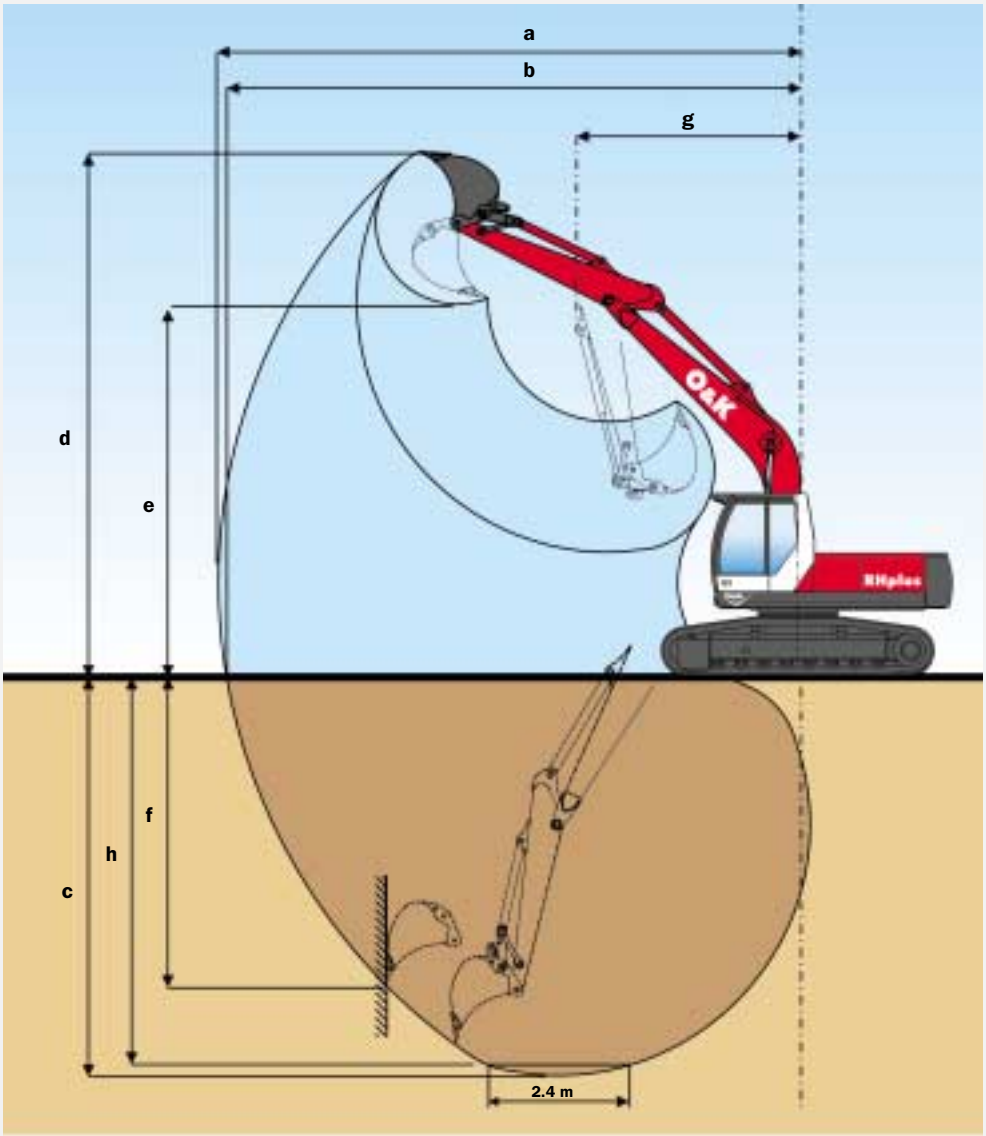
* excl. backhoe

	kg Weight [1]	kg Weight [2]	Crawler Track size	Track rollers	Upper rollers	kg/cm² Ground pressure[1]	kg/cm² Ground pressure[2]
RH plus N 500	up to 15,500	up to 16,100	D4D	7	2	0.48	0.50
RH plus N 600	up to 15,750	up to 16,350	D4D	7	2	0.41	0.43
RH plus N 700	up to 16,000	up to 16,600	D4D	7	2	0.35	0.37
RH plus LC 500	up to 16,050	up to 16,650	D4D	8	2	0.44	0.46
RH plus LC 600	up to 16,300	up to 16,900	D4D	8	2	0.37	0.39
RH plus LC 700	up to 16,550	up to 17,150	D4D	8	2	0.32	0.34

[1] RHplus with 4.6 m monoboom, 2.5 m stick and bucket (390 kg)

[2] RHplus with 3.3 m adjustable boom, 2.5 m stick and bucket (390 kg)

Working range with backhoe and monoboom 4.6 m

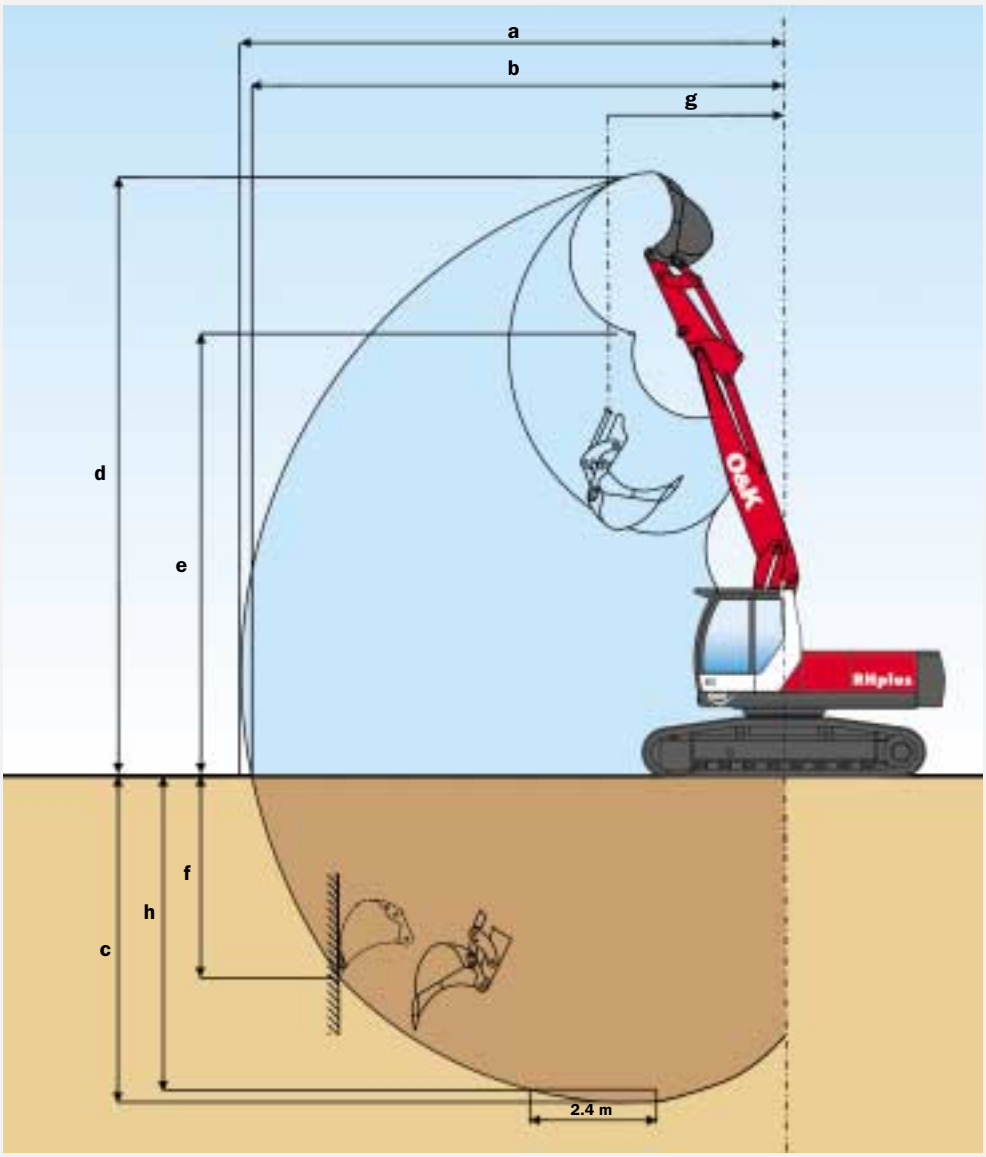


	Range	Stick length	1.7 m	2.5 m	2.9 m	3.5 m
a	Max. reach	m	7.8	8.5	8.9	9.5
b	Max. reach at level ground	m	7.6	8.3	8.7	9.3
c	Max. digging depth	m	4.6	5.4	5.8	6.4
d	Max. penetration height	m	7.7	8.1	8.3	8.6
e	Max. dump height	m	5.4	5.8	6.0	6.3
f	Max. vertical digging depth	m	2.8	3.5	3.8	4.3
g	Min. slewing radius	m	3.2	3.2	3.2	3.2
h	Max. digging depth at 2.4 m (8") wide base	m	4.3	5.2	5.6	6.3

		Digging force			
Stick		1.7 m	2.5 m	2.9 m	3.5 m
Breakout force*	kN	117	117	117	117
Ripping force*	kN	103	80	72	63

*with booster

Working range with backhoe and adjustable boom 2.0/3.3 m



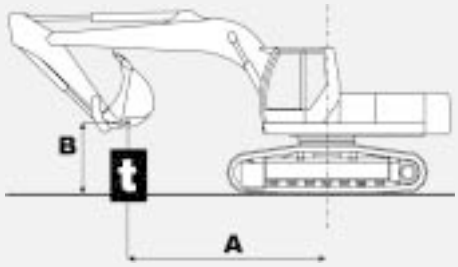
	Range		Stick length 1.7 m	2.5 m	2.9 m	3.5 m
a	Max. reach	m	8.4	9.2	9.6	10.2
b	Max. reach at level ground	m	8.2	9.0	9.4	10.0
c	Max. digging depth	m	4.9	5.7	6.1	6.7
d	Max. penetration height	m	9.5	10.2	10.5	11.1
e	Max. dump height	m	7.2	7.9	8.3	8.8
f	Max. vertical digging depth	m	3.5	4.2	4.5	5.1
g	Min. slewing radius	m	2,.5	2.6	2.8	3.1
h	Max. digging depth at 2.4 m (8") wide base	m	4.8	5.6	6.0	6.6

Stick		Digging force 1.7 m	2.5 m	2.9 m	3.5 m
Breakout force*	kN	117	117	117	117
Ripping force*	kN	103	80	72	63

*with booster

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 **Longitudinal direction +/-15°.**
***** **Limited by hydraulic system**



	RH Plus N 600								Monoboom	
A	3.0 m		4.5 m		6.0 m		7.5 m		max.	
Sticks B	a	b	a	b	a	b	a	b	a	b
4.5 m			3.8	4.5*	2.3	3.4*				
3.0 m	6.7	9.1*	3.6	5.5	2.2	3.4				
1.5 m			3.3	5.2	2.1	3.3				
1.7 m Ground level	5.9	7.8*	3.1	5.1	2.1	3.2			1.8	2.8
1.5 m	5.9	10.4	3.1	5.0.						
3.0 m	6.1	8.1*	3.2	5.1						
4.5 m					2.4	3.4*				
3.0 m			3.6	4.7*	2.2	3.4				
1.5 m	6.1	9.8*	3.3	5.3	2.1	3.3				
2.5 m Ground level	5.8	8.2*	3.1	5.0	2.0	3.2			1.4	2.2*
1.5 m	5.7	10.2	3.0	4.9	1.9	3.1				
3.0 m	5.8	9.6*	3.0	4.9						
4.5 m					2.4	3.1*				
3.0 m			3.7	4.2*	2.3	3.5	1.5	2.3		
1.5 m	6.3	9.5*	3.4	5.3	2.1	3.3	1.4	2.3		
2.9 m Ground level	5.8	8.5*	3.1	5.0	2.0	3.2	1.4	2.2	1.3	1.7*
1.5 m	5.7	10.2	3.0	4.9	1.9	3.1.				
3.0 m	5.7	10.2	3.0	4.9	1.9	3.1				
4.5 m							1.6	2.2*		
3.0 m					2.3	3.1*	1.5	2.4		
1.5 m	6.6	7.9*	3.5	5.0*	2.2	3.4	1.4	2.3		
3.5 m Ground level	5.9	9.7*	3.1	5.1	2.0	3.2	1.4	2.2	1.1	1.3*
1.5 m	5.6	9.8*	3.0	4.9	1.9	3.1	1.3	2.1		
3.0 m	5.6	10.1	2.9	4.8	1.9	3.0				

	RH Plus LC 600								Monoboom	
A	3.0 m		4.5 m		6.0 m		7.5 m		max.	
Sticks B	a	b	a	b	a	b	a	b	a	b
4.5 m			4.5*	4.5*	2.8	3.4*				
3.0 m	8.2	9.1*	4.3	5.6*	2.7	4.4				
1.5 m			4.0	6.7	2.6	4.2				
1.7 m Ground level	7.3	7.8*	3.9	6.6	2.5	4.1			2.2	3.5
1.5 m	7.4	10.4*	3.8	6.6						
3.0 m	7.6	8.1*	3.9	5.4						
4.5 m					2.8	3.4*				
3.0 m			4.4	4.7*	2.7	3.9*				
1.5 m	7.6	9.7*	4.0	6.0*	2.6	4.2				
2.5 m Ground level	7.2	8.2*	3.8	6.6	2.5	4.1			1.8	2.2*
1.5 m	7.2	11.2*	3.7	6.4	2.4	4.0				
3.0 m	7.3	9.6*	3.7	6.3*						
4.5 m					2.9	3.1*				
3.0 m			4.2*	4.2*	2.8	3.6*	1.8	2.6*		
1.5 m	7.9	9.5*	4.1	5.6*	2.6	4.2	1.8	2.9		
2.9 m Ground level	7.3	8.5*	3.8	6.6	2.5	4.1	1.7	2.9	1.6	1.7*
1.5 m	7.2	10.4*	3.7	6.4	2.4	4.0				
3.0 m	7.2	10.2*	3.7	6.4	2.4	4.0				
4.5 m							1.9	2.2*		
3.0 m					2.8	3.1*	1.9	3.0*		
1.5 m	8.0*	8.0*	4.2	5.0*	2.6	3.9*	1.8	2.9		
3.5 m Ground level	7.4	9.7*	3.9	6.3*	2.5	4.1	1.7	2.8	1.3*	1.3*
1,5 m	7.1	9.8*	3.7	6.4	2.4	4.0	1.6	2.8		
3,0 m	7.1	10.9*	3.6	6.3	2.3	4.0				

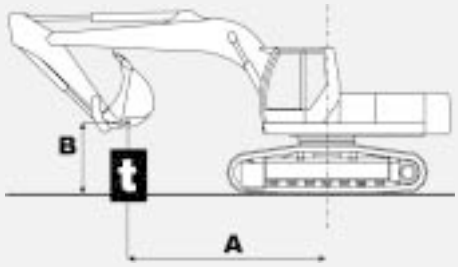
As per EN 474/5, hydraulic excavators in lifting operations must be equipped with anti-burst valves at the lifting cylinders and an overload warning device.

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.

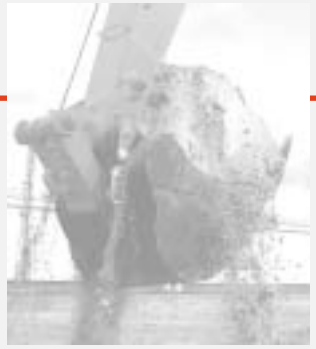
a **Total slewing range 360°.**

b **Longitudinal direction +/-15°.**

***** **Limited by hydraulic system**



	RH Plus N 600								Adjustable boom	
A	3.0 m		4.5 m		6.0 m		7.5 m		max.	
Sticks B	a	b	a	b	a	b	a	b	a	b
4.5 m	6.9*	6.9*	3.8	4.9*	2.3	3.5				
3.0 m	6.8	8.5*	3.7	5.5	2.3	3.5				
1.5 m	6.7	9.3*	3.7	5.4	2.2	3.5				
1.7 m Ground level	6.6	10.8	3.6	5.5	2.1	3.3			1.4	2.3
1.5 m	6.4	11.2	3.3	5.3	2.0	3.2				
3.0 m	6.3	11.1	3.2	5.2						
4.5 m	4.8*	4.8*	3.8	4.0*	2.4	3.4*	1.5	2.3		
3.0 m	6.8	8.2*	3.7	5.1*	2.4	3.4	1.5	2.3		
1.5 m	6.6	8.8*	3.6	5.3	2.4	3.4	1.4	2.3		
2.5 m Ground level	6.6	10.2*	3.6	5.3	2.2	3.4	1.3	2.2	1.1	1.9
1.5 m	6.4	10.8	3.4	5.4	2.0	3.2	1.3	2.1		
3.0 m	6.3	11.1	3.2	5.2	1.9	3.1				
4.5 m			3.8*	3.8*	2.4	3.3*	1.5	2.4		
3.0 m	7.0	7.2*	3.7	4.8*'	2.4	3.5	1.5	2.4		
1.5 m	6.6	9.0*	3.6	5.3	2.3	3.4	1.5	2.3		
2.9 m Ground level	6.6	9.8*	3.5	5.2	2.3	3.4	1.4	2.2	1.0	1.7*
1.5 m	6.4	10.7	3.4	5.4	2.1	3.3	1.3	2.2		
3.0 m	6.3	11.0	3.2	5.2	1.9	3.1				
4.5 m			3.1*	3.1*	2.4	2.9*	1.6	2.4		
3.0 m	4.6*	4.6*	3.7	4.1*	2.3	3.3*	1.6	2.4		
1.5 m	6.6	9.2*	3.5	5.3	2.3	3.4	1.5	2.4		
3.5 m Ground level	6.5	9.3*	3.5	5.2	2.3	3.3	1.4	2.3	0.9	1.3*
1.5 m	6.5	10.4	3.4	5.2	2.2	3.4	1.3	2.2		
3.0 m	6.2	10.8	3.3	5.3	2.0	3.2	1.3	2.1		



	RH Plus LC 600								Adjustable boom	
A	3.0 m		4.5 m		6.0 m		7.5 m		max.	
Sticks B	a	b	a	b	a	b	a	b	a	b
4.5 m	6.9*	6.9*	4.5	4.9*	2.8	4.0*				
3.0 m	8.1	8.4*	4.4	5.8*	2.8	4.3				
1.5 m	8.1	9.3*	4.3	6.7	2.7	4.3				
1.7 m Ground level	8.2	11.3*	4.3	6.7	2.6	4.3			1.8	2.8*
1.5 m	8.0	11.9*	4.1	6.9	2.5	4.1				
3.0 m	7.9	11.9*	3.9	6.5*						
4.5 m	4.8*	4.8*	4.0*	4.0*	2.8	3.4*	1.8	2.4*		
3.0 m	8.2	8.2*	4.3	5.1*	2.8	3.9*	1.8	3.0		
1.5 m	7.9	8.8*	4.2	6.2*	2.8	4.2	1.8	2.9		
2.5 m Ground level	7.9	10.3*	4.2	6.5	2.7	4.2	1.7	2.9	1.4	2.1*
1.5 m	7.9	11.5*	4.1	6.7	2.5	4.2	1.6	2.8*		
3.0 m	7.8	11.9*	3.9	6.7	2.4	4.1				
4.5 m			3.8*	3.8*	2.9	3.3*	1.9	2.9*		
3.0 m	7.2*	7.2*	4.4	4.8*	2.8	3.6*	1.9	3.0		
1.5 m	7.9	9.0*	4.2	5.9*	2.7	4.2	1.8	3.0		
2.9 m Ground level	7.9	9.8*	4.2	6.5	2.7	4.2	1.7	2.9	1.3	1.7*
1.5 m	7.9	11.3*	4.1	6.6	2.5	4.2	1.6	2.8		
3.0 m	7.8	11.7*	4.0	6.8	2.4	4.1				
4.5 m			3.1*	3.1*	2.9	2.9*	2.0	2.6*		
3.0 m	4.7*	4.7*	4.1*	4.1*	2.8	3.3*	1.9	2.8*		
1.5 m	7.9	9.3*	4.2	5.3*	2.7	3.9*	1.9	2.9		
3.5 m Ground level	7.8	9.3*	4.1	6.4	2.7	4.1	1.8	2.9	1.1	1.3*
1.5 m	7.9	10.7*	4.2	6.4	2.6	4.2	1.7	2.8		
3.0 m	7.7	11.5*	4.0	6.7	2.4	4.1	1.6	2.8		

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

Attachments

Overall dimensions and weights



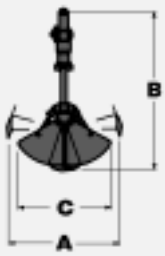

		Monoboom	Adjustable boom		Stick			
			Lower part	Upper part				
System length	**m**	4.60	2.09	3.30	1.70	2.50	2.90	3.50
Weight	**kg**	900	550	750	330	450	490	560
Linkage	**kg**				130	130	130	130
Cylinders	**kg**	217	236	217	117	117	117	117

Trenching buckets

		Rock backhoe					Backhoe					Trench bucket rigid/slewable +/- 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 buckets

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



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