

Technical Description Hydraulic Excavator

A 316
Litronic®

Operating Weight 15,2 – 17,0 t
Engine Output 86 kW (117 HP)
Bucket Capacity 0,25 – 0,85 m³



LIEBHERR

The Better Machine.



Engine

Rating per ISO 9249	86 kW (117 HP) at 1800 RPM
Model	Deutz BF4M1013EC
Type	4 cylinder in-line
Bore/stroke	108/130 mm
Displacement	4,8 l
Engine operation	4-stroke diesel direct injection turbo-charged and after-cooler in accordance with EC-guidelines
Exhaust emissions	
Cooling system	water-cooled with stepless, thermostatic and controlled fan
Air cleaner	dry-type air cleaner with pre-cleaner and automatic 95% dust discharge (TopAir); main and safety elements
Fuel tank	290 l
Engine idling	sensor controlled
Electrical system	
Voltage	24 V
Batteries	2 x 92 Ah/12 V
Alternator	24 V/55 A



Hydraulic System

Hydraulic pump	Liebherr, variable displacement, swashplate pump
Max. flow	270 l/min
Max. hydr. pressure	350 bar
Hydraulic pump regulation and control	Liebherr-Synchron-Comfort-system (LSC) with electronic engine speed sensing regulation, pressure and flow compensation, load sensing and torque controlled swing drive priority
Hydraulic tank capacity	170 l
Hydraulic system capacity	max. 350 l
Filtration	one main return filter with integrated partial micro filtration (5 µm)
Cooling	hydraulic oil radiator with stepless, thermostatic and controlled fan
Mode selector	stepless adjustment of machine performance to match application
POWER-PLUS	for maximum digging power and heavy duty jobs (without time limit)
POWER-range	for high digging power with low fuel consumption
ECO-range	for especially economical and environmentally friendly operation
Super-Finish selector	stepless adjustment of engine output - for precision work and heavy duty jobs; actuated via left joystick; possible in each selected mode
Additional function	fixed adjustable flow rates for optional accessories



Hydraulic Controls

Power distribution	via control valve with integrated safety valves, simultaneous and independent operation of travel drive, swing drive and work
Control type	
Attachment and swing	proportional via joystick levers
Travel	proportional via foot pedal
Additional functions	via switch and/or proportional foot pedals



Swing Drive

Drive	Liebherr swashplate motor with torque control and integrated brake valve
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr sealed single race ball bearing swing ring, internal teeth
Swing speed	0 - 9,0 RPM
Swing torque	42 kNm
Holding brake	pedal controlled positioning brake



Operator Cab

Cab	largely dimensioned ergonomic cab resiliently mounted, sound insulated, tinted windows, front window stores overhead, door with sliding window, large roof window, sun visors
Operator seat	shock absorbing suspension, adjustable to operator's weight, 6-way adjustable seat, backward/forward seat adjusting with automatic height adjustment
Joysticks	integrated into adjustable seat consoles
Instrument panel	ergonomically arranged, anti-glare instrumentation; automatic monitoring, display, low engine oil pressure or low hydraulic oil level
Digital hour meter	visible from outside
Heating system	hot water heat exchanger to provide heated fresh air or circulated air, with additional front window air vents, operating unit in right console
Noise emission	
ISO 6396	L_{pA} (inside cab) = 73 dB(A)
2000/14/EC	L_{wA} (surround noise) = 100 dB(A)
Sound level in correspondence with "Blue Angel" guidelines.	



Undercarriage

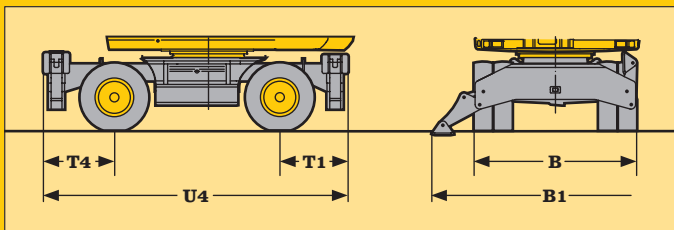
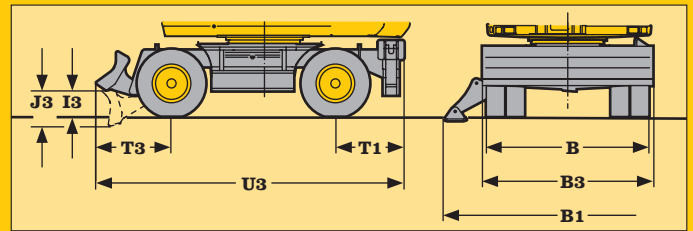
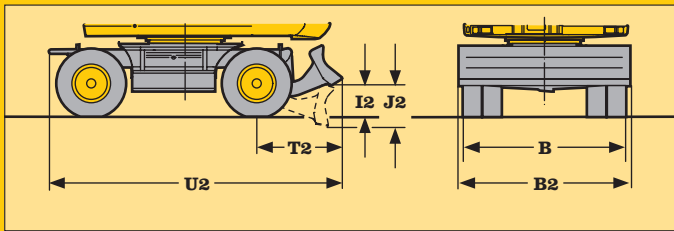
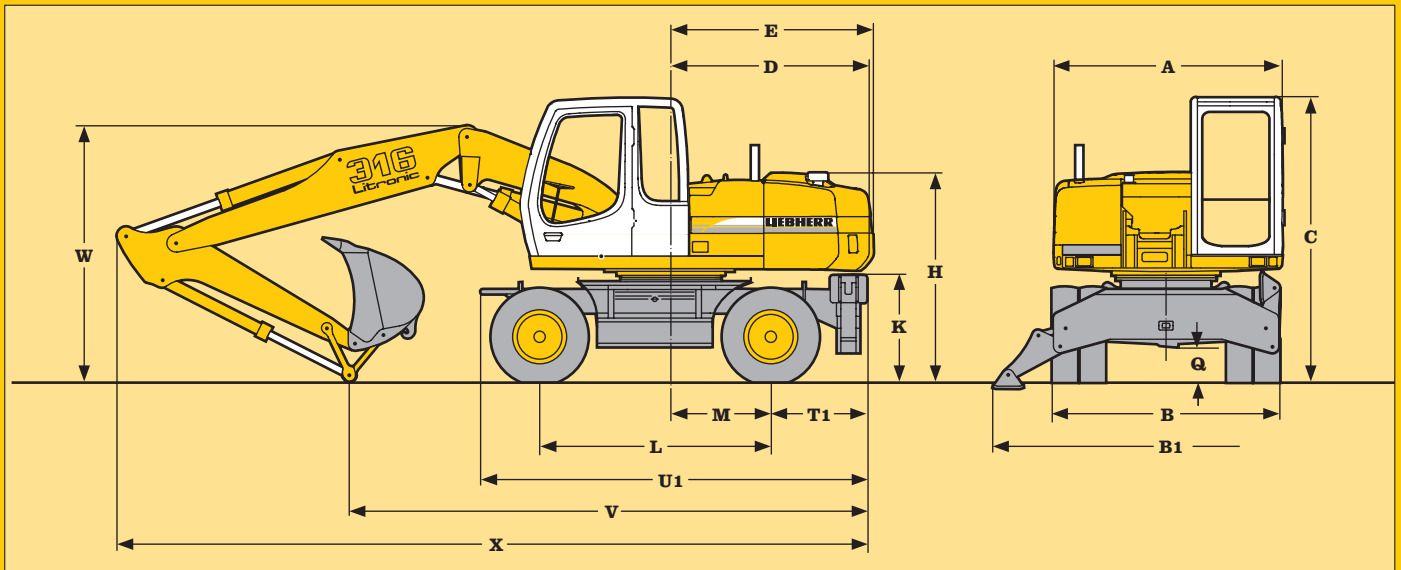
Drive	variable flow swashplate motor with automatic brake valve
Transmission	oversized two speed power shift transmission with additional creeper speed
Travel speed	0 - 2,5 km/h (creeper speed off road) 0 - 5,0 km/h (off road) 0 - 9,0 km/h (creeper speed on road) 0 - 20,0 km/h (road travel) 0 - 30,0 km/h Speeder (Option)
Axles	32 t excavator axles; automatic or operator controlled front axle oscillation lock
Brakes	wet, maintenance-free multi disc brakes, opt: rigid axle with drum brakes. Spring applied/pressure released parking brake integrated into gear box
Stabilization	2-point outriggers, stabilizing blade (adjustable during travel for dozing), stabilizing blade + 2 pt. outriggers



Attachment

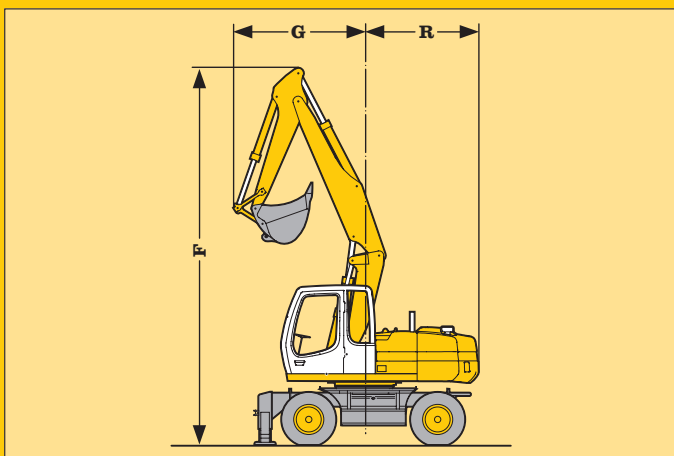
Hydraulic cylinders	Liebherr cylinders with special seal system. Shock absorption
Pivots	sealed, low maintenance
Lubrication	centralized in easily accessible locations
Hydraulic connections	pipes and hoses equipped with SAE split-flange connections
Bucket	standard equipped with 8 t safety hook for lifting

Technical Data



	mm
A	2500
B	2500
B1	3800
B2	2500
B3	2500
C	3125
D	2230
E	2230
H	2295
I2	470
I3	390
J2	620
J3	545
K	1200
L	2540
M	1100
Q	390
T1	1050
T2	1310
T3	1155
U1	4235
U2	4500
U3	4740
V ¹⁾	5750 - 5900
V ²⁾	5050 - 5650
W ¹⁾	2950 - 3100
W ²⁾	2950 - 3100
X ¹⁾	8400 - 8750
X ²⁾	8200 - 8550

1) for hydr. adjustable boom
2) for gooseneck boom



Boom	Stick m	F mm	G mm	R mm
hydr. adjustable boom	2,25	7500	2650	2230
hydr. adjustable boom	2,45	7500	2700	2230
hydr. adjustable boom	2,65	7500	2800	2230

Dimensions

Digging Envelope

- 1 stick 2,25 m
- 2 stick 2,45 m
- 3 stick 2,65 m

Stick length	m	2,25	2,45	2,65
Max. digging depth	m	5,10	5,30	5,50
Max. reach at ground level	m	8,55	8,75	8,95
Max. dumping height	m	7,40	7,55	7,75
Max. teeth height	m	9,80	9,95	10,10

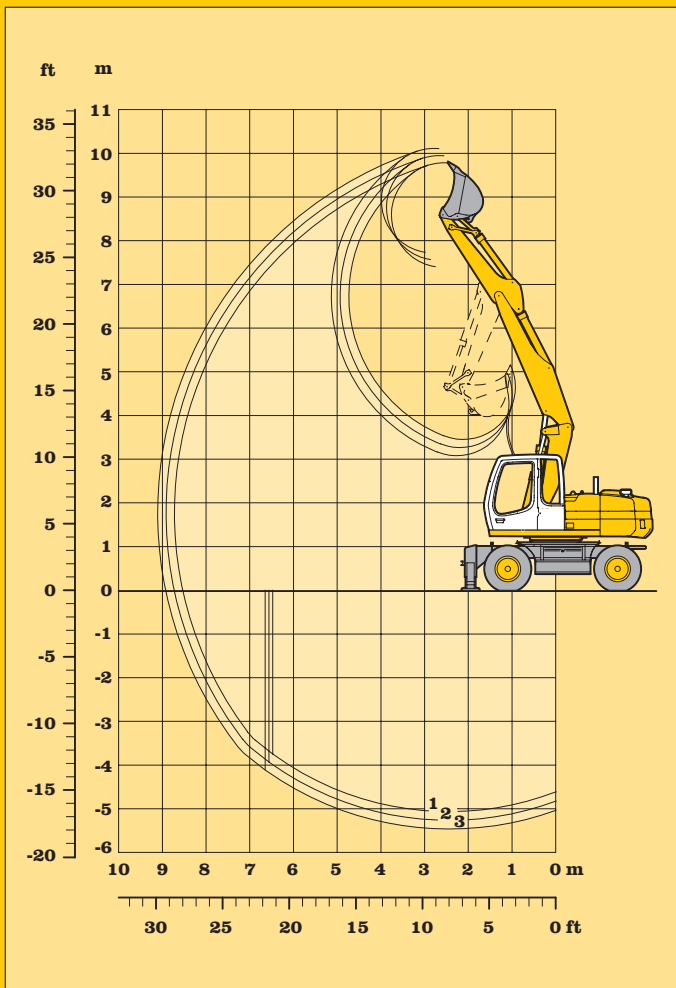
Max. digging force	kN	66,8	62,9	59,4
	t	6,8	6,4	6,1
Max. breakout force	kN	98,3	98,3	98,3
	t	10,0	10,0	10,0

Max. breakout force with ripper bucket: 114,0 kN (11,6 t)
 Max. possible digging force (stick 1,70 m): 85,7 kN (8,7 t)

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 3,40 m, stick 2,25 m and 850 mm/0,50 m³ bucket.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	15800
A 316 Litronic with 2 pt. outriggers	15900
A 316 Litronic with stabil. blade + 2 pt. outr.	16500



Buckets

Cutting width	mm	230	330	390 ¹⁾	550	550 ²⁾	650	850	1050	1250
Capacity ISO 7451	m ³	0,14	0,20	0,25	0,28	0,30	0,35	0,50	0,65	0,85
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
Weights										
Standard bucket with Liebherr teeth Z 10 C	kg	320	350	-	310	-	330	400	470	520
Ripper bucket with Liebherr-teeth Z 13 P	kg	-	-	-	-	560	-	-	-	-
Bucket with ejector and Bofors-teeth	kg	-	-	360	-	-	-	-	-	-
For machine stability per ISO 10567 the max. stick length is:										
Stabilizers raised	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	-	-
Stabilizer blade down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,05	-
2 point outriggers down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-

¹⁾ Bucket with ejector (limited digging depth)

²⁾ Ripper bucket

Backhoe Attachment with Hydr. Adjustable Boom

with stick 2,25 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised		2,9# (2,9#)		
	Stabil. blade down		2,9# (2,9#)		
	2 pt. outr. down		2,9# (2,9#)		
	Blade + 2 pt. down		2,9# (2,9#)		
6,0	Stabilizers raised		3,5# (3,5#)	2,3 (2,7#)	
	Stabil. blade down		3,5# (3,5#)	2,6 (2,7#)	
	2 pt. outr. down		3,5# (3,5#)	2,7# (2,7#)	
	Blade + 2 pt. down		3,5# (3,5#)	2,7# (2,7#)	
4,5	Stabilizers raised	4,4# (4,4#)	3,8 (4,5#)	2,4 (3,8#)	
	Stabil. blade down	4,4# (4,4#)	4,2 (4,5#)	2,6 (3,8#)	
	2 pt. outr. down	4,4# (4,4#)	4,5# (4,5#)	3,2 (3,8#)	
	Blade + 2 pt. down	4,4# (4,4#)	4,5# (4,5#)	3,8# (3,8#)	
3,0	Stabilizers raised	6,8 (10,2#)	3,6 (5,9)	2,3 (3,8)	1,4 (2,4#)
	Stabil. blade down	7,3 (10,2#)	4,0 (6,4#)	2,6 (4,8#)	1,6# (2,4#)
	2 pt. outr. down	9,3# (10,2#)	4,9 (6,4#)	3,2 (4,8#)	2,0 (2,4#)
	Blade + 2 pt. down	10,2# (10,2#)	6,0 (6,4#)	3,9 (4,8#)	2,4# (2,4#)
1,5	Stabilizers raised	6,5# (9,4#)	3,5 (5,8#)	2,2 (3,8)	1,3 (2,5)
	Stabil. blade down	7,1 (9,4#)	3,9 (7,1#)	2,5 (5,1#)	1,5 (3,1#)
	2 pt. outr. down	9,0 (9,4#)	4,8 (7,1#)	3,1 (5,1#)	2,0 (3,1#)
	Blade + 2 pt. down	9,4# (9,4#)	5,9 (7,1#)	3,8# (5,1#)	2,5 (3,1#)
0	Stabilizers raised	6,3 (11,1#)	3,5 (5,8)	2,1 (3,6)	1,3 (2,4)
	Stabil. blade down	7,1 (11,1#)	3,8 (7,3#)	2,3 (5,2#)	1,4 (2,7#)
	2 pt. outr. down	9,1 (11,1#)	4,9 (7,3#)	2,9 (5,2#)	1,9 (2,7#)
	Blade + 2 pt. down	11,1# (11,1#)	5,9 (7,3#)	3,7 (5,2#)	2,5 (2,7#)
- 1,5	Stabilizers raised	6,0 (11,6)	3,3 (5,7)	1,9 (3,5)	
	Stabil. blade down	6,7 (12,1#)	3,6 (7,4#)	2,1 (5,2#)	
	2 pt. outr. down	8,9 (12,1#)	4,5 (7,4#)	2,8 (5,2#)	
	Blade + 2 pt. down	11,8 (12,1#)	5,8 (7,4#)	3,5 (5,2#)	
- 3,0	Stabilizers raised	5,8 (11,7)	3,0 (5,5)	1,8 (3,4#)	
	Stabil. blade down	6,6 (12,5#)	3,3 (7,1#)	2,1 (3,4#)	
	2 pt. outr. down	8,8 (12,5#)	4,3 (7,1#)	2,7 (3,4#)	
	Blade + 2 pt. down	11,9 (12,5#)	5,6 (7,1#)	3,4# (3,4#)	
- 4,5	Stabilizers raised				
	Stabil. blade down				
	2 pt. outr. down				
	Blade + 2 pt. down				

with stick 2,45 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised		2,8# (2,8#)		
	Stabil. blade down		2,8# (2,8#)		
	2 pt. outr. down		2,8# (2,8#)		
	Blade + 2 pt. down		2,8# (2,8#)		
6,0	Stabilizers raised		3,2# (3,2#)	2,3 (2,7#)	
	Stabil. blade down		3,2# (3,2#)	2,6 (2,7#)	
	2 pt. outr. down		3,2# (3,2#)	2,7# (2,7#)	
	Blade + 2 pt. down		3,2# (3,2#)	2,7# (2,7#)	
4,5	Stabilizers raised		3,8 (4,0#)	2,4 (3,5#)	1,4# (1,4#)
	Stabil. blade down		4,0# (4,0#)	2,6 (3,5#)	1,4# (1,4#)
	2 pt. outr. down		4,0# (4,0#)	3,2 (3,5#)	1,4# (1,4#)
	Blade + 2 pt. down		4,0# (4,0#)	3,5# (3,5#)	1,4# (1,4#)
3,0	Stabilizers raised	6,6 (9,7#)	3,7 (5,9#)	2,3 (3,8)	1,4 (2,5)
	Stabil. blade down	7,4 (9,7#)	4,1# (6,2#)	2,6 (4,7#)	1,6 (2,7#)
	2 pt. outr. down	9,3# (9,7#)	4,9 (6,2#)	3,2 (4,7#)	2,0 (2,7#)
	Blade + 2 pt. down	9,7# (9,7#)	6,0 (6,2#)	3,9 (4,7#)	2,6 (2,7#)
1,5	Stabilizers raised	6,3 (9,7#)	3,5 (5,8)	2,2 (3,8)	1,3 (2,5)
	Stabil. blade down	7,1 (9,7#)	3,9 (7,0#)	2,5 (5,0#)	1,5 (3,4#)
	2 pt. outr. down	9,0 (9,7#)	4,8 (7,0#)	3,1 (5,0#)	2,0 (3,4#)
	Blade + 2 pt. down	9,7# (9,7#)	5,9 (7,0#)	3,8 (5,0#)	2,5 (3,4#)
0	Stabilizers raised	6,4 (10,8#)	3,4 (5,8)	2,0 (3,6)	1,3 (2,4)
	Stabil. blade down	7,2 (10,8#)	3,8 (7,2#)	2,3 (5,1#)	1,4 (3,3#)
	2 pt. outr. down	8,9# (10,8#)	4,9 (7,2#)	2,9 (5,1#)	1,9 (3,3#)
	Blade + 2 pt. down	10,8# (10,8#)	5,9 (7,2#)	3,7 (5,1#)	2,4 (3,3#)
- 1,5	Stabilizers raised	5,9 (11,5#)	3,2 (5,8)	1,9 (3,5)	
	Stabil. blade down	6,7 (12,0#)	3,6 (7,4#)	2,1 (5,2#)	
	2 pt. outr. down	8,9 (12,0#)	4,6 (7,4#)	2,7 (5,2#)	
	Blade + 2 pt. down	11,5# (12,0#)	5,8 (7,4#)	3,5 (5,2#)	
- 3,0	Stabilizers raised	5,8 (11,8)	2,9 (5,5)	1,8 (3,4)	
	Stabil. blade down	6,6 (12,6#)	3,3 (7,2#)	2,0 (3,8#)	
	2 pt. outr. down	8,8 (12,6#)	4,3 (7,2#)	2,7 (3,8#)	
	Blade + 2 pt. down	11,9 (12,6#)	5,6 (7,2#)	3,4 (3,8#)	
- 4,5	Stabilizers raised				
	Stabil. blade down				
	2 pt. outr. down				
	Blade + 2 pt. down				

with stick 2,65 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised		2,7# (2,7#)		
	Stabil. blade down		2,7# (2,7#)		
	2 pt. outr. down		2,7# (2,7#)		
	Blade + 2 pt. down		2,7# (2,7#)		
6,0	Stabilizers raised		2,9# (2,9#)	2,3 (2,6#)	
	Stabil. blade down		2,9# (2,9#)	2,6 (2,6#)	
	2 pt. outr. down		2,9# (2,9#)	2,6# (2,6#)	
	Blade + 2 pt. down		2,9# (2,9#)	2,6# (2,6#)	
4,5	Stabilizers raised		3,5# (3,5#)	2,4 (3,3#)	1,4 (1,8#)
	Stabil. blade down		3,5# (3,5#)	2,6 (3,3#)	1,6 (1,8#)
	2 pt. outr. down		3,5# (3,5#)	3,2 (3,3#)	1,8# (1,8#)
	Blade + 2 pt. down		3,5# (3,5#)	3,3# (3,3#)	1,8# (1,8#)
3,0	Stabilizers raised	6,8 (9,3#)	3,6 (5,9)	2,3 (3,8)	1,4 (2,5#)
	Stabil. blade down	7,5 (9,3#)	4,0 (6,0#)	2,6 (4,5#)	1,6 (2,7#)
	2 pt. outr. down	9,3# (9,3#)	4,9# (6,0#)	3,1 (4,5#)	2,0 (2,7#)
	Blade + 2 pt. down	9,3# (9,3#)	6,0# (6,0#)	3,8 (4,5#)	2,6 (2,7#)
1,5	Stabilizers raised	6,4 (10,0#)	3,6 (5,7#)	2,3 (3,8)	1,3 (2,5)
	Stabil. blade down	7,2# (10,0#)	3,9# (6,9#)	2,5 (5,0#)	1,5 (3,4#)
	2 pt. outr. down	8,8 (10,0#)	4,7 (6,9#)	3,1 (5,0#)	2,0 (3,4#)
	Blade + 2 pt. down	10,0# (10,0#)	5,8 (6,9#)	3,8 (5,0#)	2,5 (3,4#)
0	Stabilizers raised	6,4 (10,5#)	3,5 (5,7#)	2,1 (3,6)	1,3 (2,4)
	Stabil. blade down	7,1 (10,5#)	3,8 (7,2#)	2,3 (5,1#)	1,4# (3,6#)
	2 pt. outr. down	8,9 (10,5#)	4,7 (7,2#)	2,9# (5,1#)	1,9 (3,6#)
	Blade + 2 pt. down	10,5# (10,5#)	5,8 (7,2#)	3,7 (5,1#)	2,4 (3,6#)
- 1,5	Stabilizers raised	5,9 (11,3)	3,2 (5,8)	1,9 (3,5)	1,2 (2,0#)
	Stabil. blade down	6,7 (11,9#)	3,6 (7,3#)	2,2 (5,2#)	1,4 (2,0#)
	2 pt. outr. down	8,9 (11,9#)	4,6 (7,3#)	2,8 (5,2#)	1,8 (2,0#)
	Blade + 2 pt. down	11,5 (11,9#)	5,9 (7,3#)	3,5 (5,2#)	2,0# (2,0#)
- 3,0	Stabilizers raised	5,8 (11,7)	3,0 (5,5)	1,8 (3,3)	
	Stabil. blade down	6,6 (12,5#)	3,3 (7,3#)	2,0 (4,2#)	
	2 pt. outr. down	8,8 (12,5#)	4,3 (7,3#)	2,6 (4,2#)	
	Blade + 2 pt. down	11,9 (12,5#)	5,6 (7,3#)	3,4 (4,2#)	
- 4,5	Stabilizers raised				
	Stabil. blade down				
	2 pt. outr. down				
	Blade + 2 pt. down				

The lift capacities are stated in metric tonnes (t) on the backhoe bucket's load hook, and can be lifted 360° on firm, level supporting surface with blocked oscillating axle. Capacities shown in brackets are valid when the undercarriage is in longitudinal position and are established over the steering axle (travel position) with stabilizers raised, and over rigid axle with stabilizers down. Capacities are valid with adjusting cylinder(s) in optimal position.

Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (#).

Maximum load for the backhoe bucket's load hook is 8 t. Without bucket (0,50 m³), the lift capacities will increase by 400 kg, without bucket cylinder, link and lever they increase by an additional 219 kg. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device and automatic check valves on the hoist cylinders, when they are used for lifting operations which require the use of lifting accessories.

Lift Capacities A 316 Litronic® with Hydr. Adjustable Boom

Digging Envelope

- 1 stick 2,25 m
- 2 stick 2,45 m
- 3 stick 2,65 m

Stick length	m	2,25	2,45	2,65
Max. digging depth	m	5,00	5,20	5,40
Max. reach at ground level	m	8,25	8,45	8,65
Max. dumping height	m	6,30	6,40	6,50
Max. teeth height	m	8,65	8,75	8,90

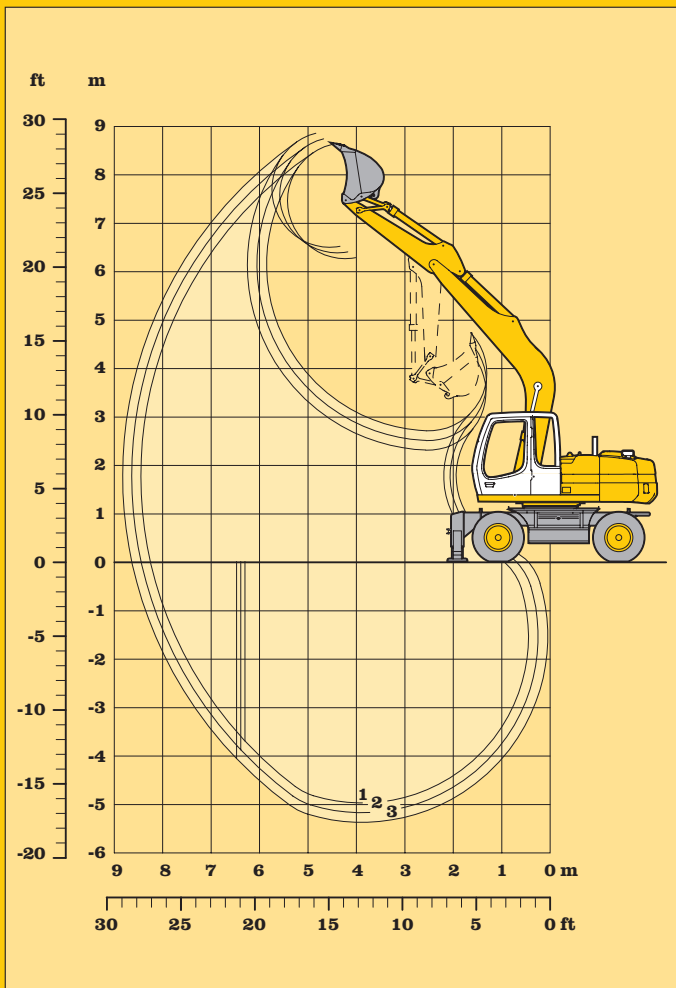
Max. digging force	kN	66,8	62,9	59,4
	t	6,8	6,4	6,1
Max. breakout force	kN	98,3	98,3	98,3
	t	10,0	10,0	10,0

Max. breakout force with ripper bucket: 114,0 kN (11,6 t)
 Max. possible digging force (stick 1,70 m): 85,7 kN (8,7 t)

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, gooseneck boom 4,80 m, stick 2,25 m and bucket 850 mm/0,50 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	15300
A 316 Litronic with 2 pt. outriggers	15350
A 316 Litronic with stabil. blade + 2 pt. outr.	16000



Buckets

Cutting width	mm	230	330	390 ¹⁾	550	550 ²⁾	650	850	1050	1250
Capacity ISO 7451	m ³	0,14	0,20	0,25	0,28	0,30	0,35	0,50	0,65	0,85
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
Weights										
Standard bucket with Liebherr teeth Z 10 C	kg	320	350	-	310	-	330	400	470	520
Ripper bucket with Liebherr-teeth Z 13 P	kg	-	-	-	-	560	-	-	-	-
Bucket with ejector and Bofors-teeth	kg	-	-	360	-	-	-	-	-	-
For machine stability per ISO 10567 the max. stick length is:										
Stabilizers raised	m	2,65	2,65	2,65	2,65	2,65	2,65	2,45	-	-
Stabilizer blade down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,45	2,05	-
2 point outriggers down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,45	2,05	-
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,45	2,05	-

¹⁾ Bucket with ejector (limited digging depth)

²⁾ Ripper bucket

Backhoe Attachment with Gooseneck Boom 4,80 m

with stick 2,25 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				
6,0	Stabilizers raised			1,9# (1,9#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			1,9# (1,9#) 1,9# (1,9#) 1,9# (1,9#)	
4,5	Stabilizers raised			2,2 (3,4#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,4 (3,4#) 3,1 (3,4#) 3,4# (3,4#)	
3,0	Stabilizers raised	6,1 (7,8#)	3,3 (5,1#)	2,1 (3,6)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	6,9 (7,8#) 7,8# (7,8#) 7,8# (7,8#)	3,7 (5,1#) 4,7 (5,1#) 5,1# (5,1#)	2,3 (4,1#) 2,9 (4,1#) 3,7 (4,1#)	
1,5	Stabilizers raised	5,0# (5,0#)	2,9 (5,4)	1,9 (3,5)	1,3 (1,8#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,0# (5,0#) 5,0# (5,0#) 5,0# (5,0#)	3,3 (6,4#) 4,3 (6,4#) 5,5 (6,4#)	2,2 (4,7#) 2,8 (4,7#) 3,5 (4,7#)	1,5 (1,8#) 1,8# (1,8#) 1,8# (1,8#)
0	Stabilizers raised	5,0 (5,5#)	2,7 (5,2)	1,8 (3,3)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,5# (5,5#) 5,5# (5,5#) 5,5# (5,5#)	3,1 (7,2#) 4,1 (7,2#) 5,3 (7,2#)	2,0 (5,1#) 2,7 (5,1#) 3,4 (5,1#)	
- 1,5	Stabilizers raised	5,0 (8,1#)	2,7 (5,1)	1,8 (3,3)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,7 (8,1#) 7,8 (8,1#) 8,1# (8,1#)	3,0 (7,2#) 4,0 (7,2#) 5,2 (7,2#)	2,0 (5,1#) 2,6 (5,1#) 3,4 (5,1#)	
- 3,0	Stabilizers raised	5,2 (9,6#)	2,8 (5,2)		
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,9 (9,6#) 8,0 (9,6#) 9,6# (9,6#)	3,1 (6,4#) 4,1 (6,4#) 5,3 (6,4#)		
- 4,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				

with stick 2,45 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				
6,0	Stabilizers raised			2,1# (2,1#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,1# (2,1#) 2,1# (2,1#) 2,1# (2,1#)	
4,5	Stabilizers raised			2,2 (3,3#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,4 (3,3#) 3,1 (3,3#) 3,3# (3,3#)	
3,0	Stabilizers raised	6,2 (7,2#)	3,3 (4,8#)	2,1 (3,6)	1,4 (1,7#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	7,0 (7,2#) 7,2# (7,2#) 7,2# (7,2#)	3,7 (4,8#) 4,7 (4,8#) 4,8# (4,8#)	2,3 (4,0#) 2,9 (4,0#) 3,7 (4,0#)	1,5 (1,7#) 1,7# (1,7#) 1,7# (1,7#)
1,5	Stabilizers raised	5,2 (5,8#)	2,9 (5,4)	1,9 (3,5)	1,3 (2,3#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,8# (5,8#) 5,8# (5,8#) 5,8# (5,8#)	3,3 (6,2#) 4,3 (6,2#) 5,5 (6,2#)	2,1 (4,6#) 2,8 (4,6#) 3,5 (4,6#)	1,5 (2,3#) 1,9 (2,3#) 2,3# (2,3#)
0	Stabilizers raised	4,9 (5,6#)	2,7 (5,2)	1,8 (3,3)	1,2 (1,7#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,6# (5,6#) 5,6# (5,6#) 5,6# (5,6#)	3,1 (7,0#) 4,0 (7,0#) 5,2 (7,0#)	2,0 (5,0#) 2,6 (5,0#) 3,4 (5,0#)	1,4 (1,7#) 1,7# (1,7#) 1,7# (1,7#)
- 1,5	Stabilizers raised	4,9 (7,8#)	2,6 (5,1)	1,7 (3,3)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,7 (7,8#) 7,7 (7,8#) 7,8# (7,8#)	3,0 (7,2#) 4,0 (7,2#) 5,2 (7,2#)	2,0 (5,1#) 2,6 (5,1#) 3,3 (5,1#)	
- 3,0	Stabilizers raised	5,1 (9,9#)	2,7 (5,2)	1,8 (3,1#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,8 (9,9#) 7,9 (9,9#) 9,9# (9,9#)	3,1 (6,5#) 4,0 (6,5#) 5,2 (6,5#)	2,0 (3,1#) 2,7 (3,1#) 3,1# (3,1#)	
- 4,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				

with stick 2,65 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				
6,0	Stabilizers raised			2,2# (2,2#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,2# (2,2#) 2,2# (2,2#) 2,2# (2,2#)	
4,5	Stabilizers raised			2,2 (3,1#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,4 (3,1#) 3,1# (3,1#) 3,1# (3,1#)	
3,0	Stabilizers raised	6,4 (6,6#)	3,3 (4,6#)	2,0 (3,6)	1,3 (2,0#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	6,6# (6,6#) 6,6# (6,6#) 6,6# (6,6#)	3,7 (4,6#) 4,6# (4,6#) 4,6# (4,6#)	2,3 (3,8#) 2,9 (3,8#) 3,7 (3,8#)	1,5 (2,0#) 2,0 (2,0#) 2,0# (2,0#)
1,5	Stabilizers raised	5,3 (6,8#)	2,9 (5,4)	1,9 (3,4)	1,3 (2,4)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	6,0 (6,8#) 6,8# (6,8#) 6,8# (6,8#)	3,3 (6,0#) 4,3 (6,0#) 5,5 (6,0#)	2,1 (4,4#) 2,7 (4,4#) 3,5 (4,4#)	1,4 (2,6#) 1,9 (2,6#) 2,4 (2,6#)
0	Stabilizers raised	4,9 (5,6#)	2,7 (5,1)	1,7 (3,3)	1,2 (2,3)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,6 (5,6#) 5,6# (5,6#) 5,6# (5,6#)	3,0 (6,9#) 4,0 (6,9#) 5,2 (6,9#)	2,0 (4,9#) 2,6 (4,9#) 3,4 (4,9#)	1,4 (2,4#) 1,8 (2,4#) 2,4 (2,4#)
- 1,5	Stabilizers raised	4,9 (7,4#)	2,6 (5,0)	1,7 (3,2)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,6 (7,4#) 7,4# (7,4#) 7,4# (7,4#)	3,0 (7,2#) 3,9 (7,2#) 5,1 (7,2#)	1,9 (5,1#) 2,5 (5,1#) 3,3 (5,1#)	
- 3,0	Stabilizers raised	5,0 (10,1#)	2,6 (5,1)	1,7 (3,3)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,7 (10,1#) 7,8 (10,1#) 10,1# (10,1#)	3,0 (6,6#) 4,0 (6,6#) 5,2 (6,6#)	2,0 (4,6#) 2,6 (4,6#) 3,3 (4,6#)	
- 4,5	Stabilizers raised	5,3 (7,3#)	2,9 (4,6#)		
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	6,1 (7,3#) 7,3# (7,3#) 7,3# (7,3#)	3,2 (4,6#) 4,2 (4,6#) 4,6# (4,6#)		

The lift capacities are stated in metric tonnes (t) on the backhoe bucket's load hook, and can be lifted 360° on firm, level supporting surface with blocked oscillating axle. Capacities shown in brackets are valid when the undercarriage is in longitudinal position and are established over the steering axle (travel position) with stabilizers raised, and over rigid axle with stabilizers down. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (#). Maximum load for the backhoe bucket's load hook is 8 t. Without bucket (0,50 m³), the lift capacities will increase by 400 kg, without bucket cylinder, link and lever they increase by an additional 219 kg. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook. According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device and automatic check valves on the hoist cylinders, when they are used for lifting operations which require the use of lifting accessories.

Lift Capacities A 316 Litronic® with Gooseneck Boom 4,80 m

Digging Envelope

1 stick 2,25 m
 2 stick 2,45 m
 3 stick 2,65 m
 at max. attachment offset with vertical ditch walls

4 stick 2,25 m
 5 stick 2,45 m
 6 stick 2,65 m
 with set straight boom

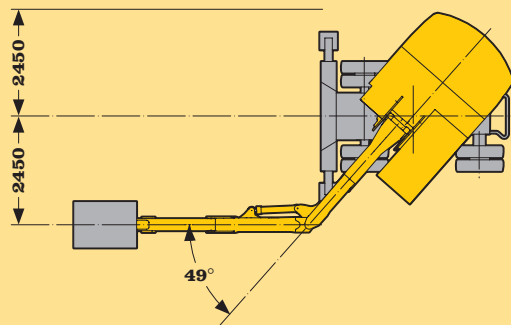
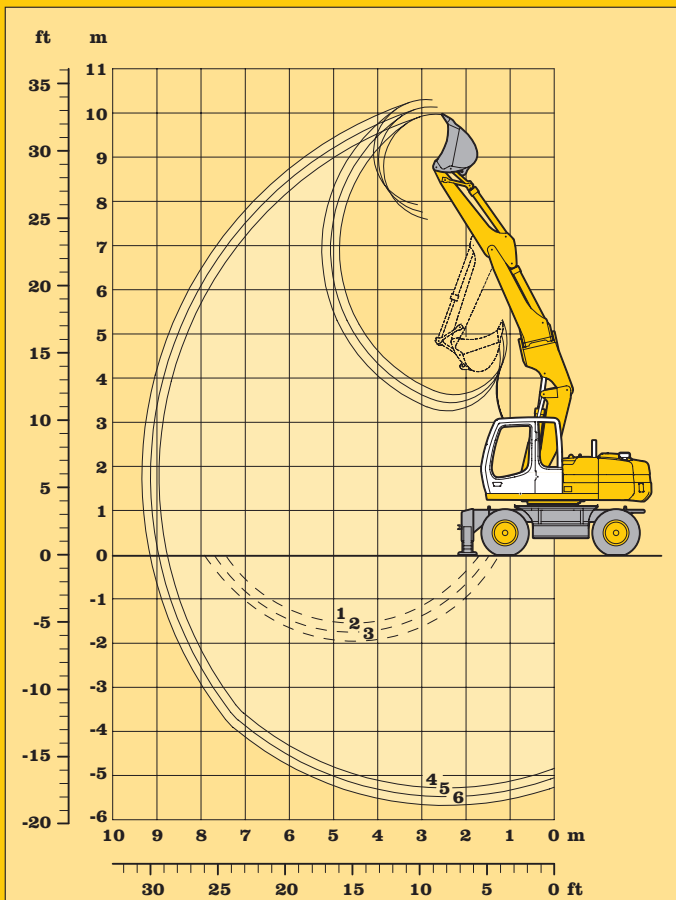
Stick length	m	2,25	2,45	2,65
Max. digging depth	m	5,30	5,50	5,70
Max. reach at ground level	m	8,75	8,95	9,15
Max. dumping height	m	7,60	7,75	7,90
Max. teeth height	m	9,95	10,15	10,30
Max. digging force	kN	66,8	62,9	59,4
	t	6,8	6,4	6,1
Max. breakout force	kN	98,3	98,3	98,3
	t	10,0	10,0	10,0

Max. breakout force with ripper bucket: 114,0 kN (11,6 t)
 Max. possible digging force (stick 1,70 m): 85,7 kN (8,7 t)

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable offset boom 3,60 m, stick 2,25 m and bucket 850 mm/0,50 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	16300
A 316 Litronic with 2 pt. outriggers	16400
A 316 Litronic with stabil. blade + 2 pt. outr.	17000



Buckets

Cutting width	mm	230	330	390 ¹⁾	550	550 ²⁾	650	850	1050	1250
Capacity ISO 7451	m ³	0,14	0,20	0,25	0,28	0,30	0,35	0,50	0,65	0,85
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
Weights										
Standard bucket with Liebherr teeth Z 10 C	kg	320	350	-	310	-	330	400	470	520
Ripper bucket with Liebherr-teeth Z 13 P	kg	-	-	-	-	560	-	-	-	-
Bucket with ejector and Bofors-teeth	kg	-	-	360	-	-	-	-	-	-
For machine stability per ISO 10567 the max. stick length is:										
Stabilizers raised	m	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-	-
Stabilizer blade down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	-	-
2 point outriggers down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-

¹⁾ Bucket with ejector (limited digging depth)

²⁾ Ripper bucket

Backhoe Attachment with Adjustable Up/Down plus Offset Boom

with stick 2,25 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised		3,1# (3,1#)		
	Stabil. blade down		3,1# (3,1#)		
	2 pt. outr. down		3,1# (3,1#)		
	Blade + 2 pt. down		3,1# (3,1#)		
6,0	Stabilizers raised		3,6# (3,6#)	2,3 (3,0#)	
	Stabil. blade down		3,6# (3,6#)	2,6 (3,0#)	
	2 pt. outr. down		3,6# (3,6#)	3,0# (3,0#)	
	Blade + 2 pt. down		3,6# (3,6#)	3,0# (3,0#)	
4,5	Stabilizers raised	4,9# (4,9#)	3,8 (4,7#)	2,4 (3,9#)	1,4 (1,6#)
	Stabil. blade down	4,9# (4,9#)	4,1# (4,7#)	2,6 (4,0#)	1,5 (1,6#)
	2 pt. outr. down	4,9# (4,9#)	4,7# (4,7#)	3,2 (4,0#)	1,6# (1,6#)
	Blade + 2 pt. down	4,9# (4,9#)	4,7# (4,7#)	3,9 (4,0#)	1,6# (1,6#)
3,0	Stabilizers raised	6,5 (9,8#)	3,6 (5,9)	2,3# (3,8)	1,3 (2,5)
	Stabil. blade down	7,3 (9,8#)	4,0 (6,2#)	2,6 (4,6#)	1,5 (3,0#)
	2 pt. outr. down	9,0 (9,8#)	4,8 (6,2#)	3,2 (4,6#)	2,0 (3,0#)
	Blade + 2 pt. down	9,8# (9,8#)	6,0 (6,2#)	3,9 (4,6#)	2,5 (3,0#)
1,5	Stabilizers raised	6,3 (8,9#)	3,5 (5,7)	2,2 (3,8)	1,3 (2,4)
	Stabil. blade down	7,1 (8,9#)	3,9 (6,9#)	2,5 (4,9#)	1,5 (3,8#)
	2 pt. outr. down	8,7# (8,9#)	4,8 (6,9#)	3,1 (4,9#)	1,9 (3,8#)
	Blade + 2 pt. down	8,9# (8,9#)	5,8 (6,9#)	3,9# (4,9#)	2,5 (3,8#)
0	Stabilizers raised	6,3 (10,6#)	3,4 (5,8)	2,0# (3,6#)	1,2 (2,3)
	Stabil. blade down	7,1 (10,6#)	3,8 (7,0#)	2,3 (5,0#)	1,4 (3,7#)
	2 pt. outr. down	9,0 (10,6#)	4,9 (7,0#)	2,9 (5,0#)	1,8 (3,7#)
	Blade + 2 pt. down	10,6# (10,6#)	5,9 (7,0#)	3,6 (5,0#)	2,4 (3,7#)
- 1,5	Stabilizers raised	5,8 (11,4#)	3,2 (5,8)	1,8 (3,4)	
	Stabil. blade down	6,6 (11,7#)	3,6 (7,1#)	2,1 (5,1#)	
	2 pt. outr. down	8,8 (11,7#)	4,6 (7,1#)	2,7 (5,1#)	
	Blade + 2 pt. down	11,4# (11,7#)	5,9 (7,1#)	3,5 (5,1#)	
- 3,0	Stabilizers raised	5,7 (11,7)	2,8 (5,4)	1,7 (3,3)	
	Stabil. blade down	6,5 (12,3#)	3,2 (7,1#)	1,9 (3,7#)	
	2 pt. outr. down	8,7 (12,3#)	4,2 (7,1#)	2,6 (3,7#)	
	Blade + 2 pt. down	11,8 (12,3#)	5,5 (7,1#)	3,3 (3,7#)	
- 4,5	Stabilizers raised				
	Stabil. blade down				
	2 pt. outr. down				
	Blade + 2 pt. down				

with stick 2,45 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised		2,9# (2,9#)		
	Stabil. blade down		2,9# (2,9#)		
	2 pt. outr. down		2,9# (2,9#)		
	Blade + 2 pt. down		2,9# (2,9#)		
6,0	Stabilizers raised		3,3# (3,3#)	2,4 (2,9#)	
	Stabil. blade down		3,3# (3,3#)	2,6 (2,9#)	
	2 pt. outr. down		3,3# (3,3#)	2,9# (2,9#)	
	Blade + 2 pt. down		3,3# (3,3#)	2,9# (2,9#)	
4,5	Stabilizers raised		3,8 (4,1#)	2,4 (3,7#)	1,4 (2,0#)
	Stabil. blade down		4,1# (4,1#)	2,6 (3,7#)	1,6 (2,0#)
	2 pt. outr. down		4,1# (4,1#)	3,2 (3,7#)	2,0# (2,0#)
	Blade + 2 pt. down		4,1# (4,1#)	3,7# (3,7#)	2,0# (2,0#)
3,0	Stabilizers raised	6,5 (9,7#)	3,6 (5,8)	2,4 (3,8)	1,4 (2,5)
	Stabil. blade down	7,3 (9,7#)	4,0 (6,0#)	2,6 (4,5#)	1,5# (3,1#)
	2 pt. outr. down	9,1 (9,7#)	4,9 (6,0#)	3,2# (4,5#)	2,0 (3,1#)
	Blade + 2 pt. down	9,7# (9,7#)	5,9 (6,0#)	3,8 (4,5#)	2,5 (3,1#)
1,5	Stabilizers raised	6,3 (9,1#)	3,5 (5,7)	2,3 (3,8)	1,3 (2,4)
	Stabil. blade down	7,1 (9,1#)	3,9 (6,7#)	2,5 (4,8#)	1,5 (3,8#)
	2 pt. outr. down	8,6 (9,1#)	4,7# (6,7#)	3,1 (4,8#)	1,9 (3,8#)
	Blade + 2 pt. down	9,1# (9,1#)	5,8# (6,7#)	3,8 (4,8#)	2,5 (3,8#)
0	Stabilizers raised	6,3 (10,4#)	3,4 (5,7#)	2,0 (3,6)	1,2 (2,3)
	Stabil. blade down	7,2 (10,4#)	3,8 (6,9#)	2,3 (4,9#)	1,4 (3,7#)
	2 pt. outr. down	8,7 (10,4#)	4,8 (6,9#)	2,9 (4,9#)	1,8 (3,7#)
	Blade + 2 pt. down	10,4# (10,4#)	5,7 (6,9#)	3,7 (4,9#)	2,4 (3,7#)
- 1,5	Stabilizers raised	5,8 (11,2)	3,2 (5,8)	1,8 (3,4)	1,1 (2,2#)
	Stabil. blade down	6,6 (11,6#)	3,6 (7,1#)	2,1 (5,0#)	1,3 (2,2#)
	2 pt. outr. down	8,8 (11,6#)	4,6 (7,1#)	2,7 (5,0#)	1,7 (2,2#)
	Blade + 2 pt. down	11,3 (11,6#)	5,9 (7,1#)	3,5 (5,0#)	2,2# (2,2#)
- 3,0	Stabilizers raised	5,6 (11,6)	2,8 (5,4)	1,6 (3,2)	
	Stabil. blade down	6,4 (12,2#)	3,2 (7,1#)	1,9 (4,1#)	
	2 pt. outr. down	8,6 (12,2#)	4,2 (7,1#)	2,5 (4,1#)	
	Blade + 2 pt. down	11,8 (12,2#)	5,5 (7,1#)	3,3 (4,1#)	
- 4,5	Stabilizers raised		5,3 (8,2#)		
	Stabil. blade down		6,1 (8,2#)		
	2 pt. outr. down		8,2# (8,2#)		
	Blade + 2 pt. down		8,2# (8,2#)		

with stick 2,65 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised		2,8# (2,8#)	1,4# (1,4#)	
	Stabil. blade down		2,8# (2,8#)	1,4# (1,4#)	
	2 pt. outr. down		2,8# (2,8#)	1,4# (1,4#)	
	Blade + 2 pt. down		2,8# (2,8#)	1,4# (1,4#)	
6,0	Stabilizers raised		2,9# (2,9#)	2,4 (2,7#)	
	Stabil. blade down		2,9# (2,9#)	2,6 (2,7#)	
	2 pt. outr. down		2,9# (2,9#)	2,7# (2,7#)	
	Blade + 2 pt. down		2,9# (2,9#)	2,7# (2,7#)	
4,5	Stabilizers raised		3,6# (3,6#)	2,4 (3,4#)	1,4 (2,2#)
	Stabil. blade down		3,6# (3,6#)	2,6 (3,4#)	1,6 (2,2#)
	2 pt. outr. down		3,6# (3,6#)	3,2 (3,4#)	2,0 (2,2#)
	Blade + 2 pt. down		3,6# (3,6#)	3,4# (3,4#)	2,2# (2,2#)
3,0	Stabilizers raised	6,7 (9,3#)	3,6 (5,8#)	2,3 (3,8)	1,4 (2,5)
	Stabil. blade down	7,2 (9,3#)	4,0 (5,8#)	2,6 (4,4#)	1,6 (3,1#)
	2 pt. outr. down	9,1 (9,3#)	4,8 (5,8#)	3,2 (4,4#)	2,0 (3,1#)
	Blade + 2 pt. down	9,3# (9,3#)	5,8# (5,8#)	3,8 (4,4#)	2,5# (3,1#)
1,5	Stabilizers raised	6,4 (9,3#)	3,4 (5,6)	2,3 (3,7)	1,3 (2,4)
	Stabil. blade down	6,8 (9,3#)	3,8 (6,6#)	2,5 (4,7#)	1,5 (3,7#)
	2 pt. outr. down	8,6 (9,3#)	4,7 (6,6#)	3,1 (4,7#)	1,9 (3,7#)
	Blade + 2 pt. down	9,3# (9,3#)	5,7 (6,6#)	3,7 (4,7#)	2,5 (3,7#)
0	Stabilizers raised	6,4 (10,1#)	3,5 (5,6)	2,1 (3,6)	1,2 (2,3)
	Stabil. blade down	7,1 (10,1#)	3,9 (6,8#)	2,3 (4,8#)	1,4# (3,7#)
	2 pt. outr. down	8,8 (10,1#)	4,7 (6,8#)	2,9# (4,8#)	1,8 (3,7#)
	Blade + 2 pt. down	10,1# (10,1#)	5,7 (6,8#)	3,7 (4,8#)	2,4 (3,7#)
- 1,5	Stabilizers raised	5,8 (11,2)	3,2 (5,8)	1,8 (3,4)	1,1 (2,2)
	Stabil. blade down	6,6 (11,4#)	3,5 (7,0#)	2,1 (5,0#)	1,3 (3,1#)
	2 pt. outr. down	8,9 (11,4#)	4,6 (7,0#)	2,7 (5,0#)	1,7 (3,1#)
	Blade + 2 pt. down	11,2# (11,4#)	5,9 (7,0#)	3,5 (5,0#)	2,3 (3,1#)
- 3,0	Stabilizers raised	5,6 (11,6)	2,9 (5,4)	1,6 (3,2)	
	Stabil. blade down	6,4 (12,0#)	3,2 (7,2#)	1,9 (4,3#)	
	2 pt. outr. down	8,6 (12,0#)	4,3 (7,2#)	2,5 (4,3#)	
	Blade + 2 pt. down	11,7 (12,0#)	5,4 (7,2#)	3,3 (4,3#)	
- 4,5	Stabilizers raised		5,3 (9,3#)	2,7 (4,4#)	
	Stabil. blade down		6,1 (9,3#)	3,0 (4,4#)	
	2 pt. outr. down		8,3 (9,3#)	4,0 (4,4#)	
	Blade + 2 pt. down		9,3# (9,3#)	4,4# (4,4#)	

The lift capacities are stated in metric tonnes (t) on the backhoe bucket's load hook, and can be lifted 360° on firm, level supporting surface with blocked oscillating axle. Capacities shown in brackets are valid when the undercarriage is in longitudinal position and are established over the steering axle (travel position) with stabilizers raised, and over rigid axle with stabilizers down. Capacities are valid with adjusting cylinder(s) in optimal position.

Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (#).

Maximum load for the backhoe bucket's load hook is 8 t. Without bucket (0,50 m³), the lift capacities will increase by 400 kg, without bucket cylinder, link and lever they increase by an additional 219 kg. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device and automatic check valves on the hoist cylinders, when they are used for lifting operations which require the use of lifting accessories.

Lift Capacities A 316 Litronic® with Adjustable Up/Down plus Offset Boom

Digging Envelope

1 stick 2,25 m
 2 stick 2,45 m
 3 stick 2,65 m
 at max. attachment offset with vertical ditch walls

4 stick 2,25 m
 5 stick 2,45 m
 6 stick 2,65 m
 with vertical ditch walls

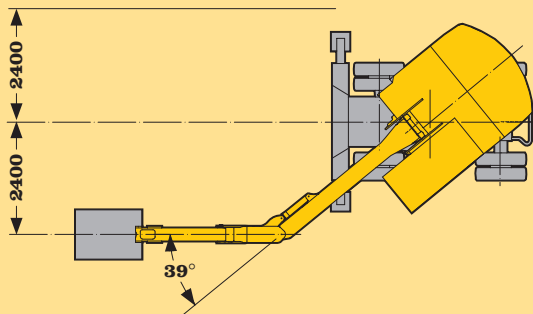
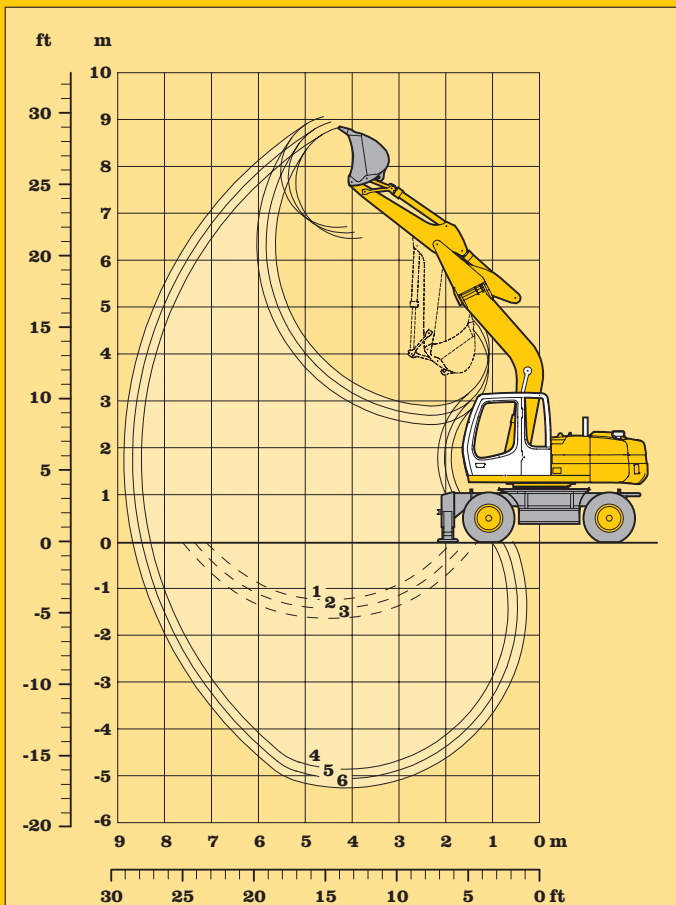
Stick length	m	2,25	2,45	2,65
Max. digging depth	m	4,85	5,05	5,25
Max. reach at ground level	m	8,30	8,50	8,70
Max. dumping height	m	6,45	6,60	6,70
Max. teeth height	m	8,85	8,95	9,05
Max. digging force	kN	66,8	62,9	59,4
	t	6,8	6,4	6,1
Max. breakout force	kN	98,3	98,3	98,3
	t	10,0	10,0	10,0

Max. breakout force with ripper bucket: 114,0 kN (11,6 t)
 Max. possible digging force (stick 1,70 m): 85,7 kN (8,7 t)

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, adjustable offset boom 4,90 m, stick 2,25 m and bucket 850 mm/0,50 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	15500
A 316 Litronic with 2 pt. outriggers	15550
A 316 Litronic with stabil. blade + 2 pt. outr.	16200



Buckets

Cutting width	mm	230	330	390 ¹⁾	550	550 ²⁾	650	850	1050	1250
Capacity ISO 7451	m ³	0,14	0,20	0,25	0,28	0,30	0,35	0,50	0,65	0,85
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
Weights										
Standard bucket with Liebherr teeth Z 10 C	kg	320	350	-	310	-	330	400	470	520
Ripper bucket with Liebherr-teeth Z 13 P	kg	-	-	-	-	560	-	-	-	-
Bucket with ejector and Bofors-teeth	kg	-	-	360	-	-	-	-	-	-
For machine stability per ISO 10567 the max. stick length is:										
Stabilizers raised	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	-	-
Stabilizer blade down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-
2 point outriggers down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,65	2,65	2,65	2,65	2,65	2,25	-

¹⁾ Bucket with ejector (limited digging depth)

²⁾ Ripper bucket

Backhoe Attachment with Adjustable Offset Boom 4,90 m

with stick 2,25 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				
6,0	Stabilizers raised			1,8# (1,8#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			1,8# (1,8#) 1,8# (1,8#) 1,8# (1,8#)	
4,5	Stabilizers raised		3,6 (4,3#)	2,2 (3,4#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down		4,0 (4,3#) 4,3# (4,3#) 4,3# (4,3#)	2,4 (3,4#) 3,1 (3,4#) 3,4# (3,4#)	
3,0	Stabilizers raised	6,1 (8,4#)	3,3 (5,4#)	2,0 (3,6)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	6,8 (8,4#) 8,4# (8,4#) 8,4# (8,4#)	3,6 (5,4#) 4,6 (5,4#) 5,4# (5,4#)	2,3 (4,3#) 2,9 (4,3#) 3,7 (4,3#)	
1,5	Stabilizers raised	4,9# (4,9#)	2,9 (5,4)	1,9 (3,4)	1,3 (1,8#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	4,9# (4,9#) 4,9# (4,9#) 4,9# (4,9#)	3,2 (6,5#) 4,2 (6,5#) 5,5 (6,5#)	2,1 (4,8#) 2,7 (4,8#) 3,5 (4,8#)	1,5 (1,8#) 1,8# (1,8#) 1,8# (1,8#)
0	Stabilizers raised	4,8 (5,6#)	2,6 (5,1)	1,7 (3,3)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,5 (5,6#) 5,6# (5,6#) 5,6# (5,6#)	3,0 (7,1#) 4,0 (7,1#) 5,2 (7,1#)	2,0 (5,1#) 2,6 (5,1#) 3,4 (5,1#)	
- 1,5	Stabilizers raised	4,8 (8,0#)	2,6 (5,0)	1,7 (3,2)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,5 (8,0#) 7,6 (8,0#) 8,0# (8,0#)	2,9 (7,0#) 3,9 (7,0#) 5,1 (7,0#)	1,9 (5,0#) 2,6 (5,0#) 3,3 (5,0#)	
- 3,0	Stabilizers raised	5,0 (8,8#)	2,7 (5,1)		
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,7 (8,8#) 7,8 (8,8#) 8,8# (8,8#)	3,0 (6,0#) 4,0 (6,0#) 5,2 (6,0#)		
- 4,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				

with stick 2,45 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				
6,0	Stabilizers raised			2,0# (2,0#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,0# (2,0#) 2,0# (2,0#) 2,0# (2,0#)	
4,5	Stabilizers raised		3,7 (4,0#)	2,2 (3,2#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down		4,0# (4,0#) 4,0# (4,0#) 4,0# (4,0#)	2,4 (3,2#) 3,1 (3,2#) 3,2# (3,2#)	
3,0	Stabilizers raised	6,2 (7,9#)	3,3 (5,2#)	2,0 (3,6)	1,3 (1,7#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	7,0 (7,9#) 7,9# (7,9#) 7,9# (7,9#)	3,7 (5,2#) 4,7 (5,2#) 5,2# (5,2#)	2,3 (4,1#) 2,9 (4,1#) 3,7 (4,1#)	1,5 (1,7#) 1,7# (1,7#) 1,7# (1,7#)
1,5	Stabilizers raised	5,1 (5,7#)	2,9 (5,4)	1,9 (3,4)	1,3 (2,3#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,7# (5,7#) 5,7# (5,7#) 5,7# (5,7#)	3,2 (6,4#) 4,2 (6,4#) 5,5 (6,4#)	2,1 (4,7#) 2,7 (4,7#) 3,5 (4,7#)	1,4 (2,3#) 1,9 (2,3#) 2,3# (2,3#)
0	Stabilizers raised	4,7 (5,6#)	2,6 (5,1)	1,7 (3,3)	1,2 (1,7#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,5 (5,6#) 5,6# (5,6#) 5,6# (5,6#)	3,0 (7,0#) 3,9 (7,0#) 5,2 (7,0#)	2,0 (5,0#) 2,6 (5,0#) 3,3 (5,0#)	1,4 (1,7#) 1,7# (1,7#) 1,7# (1,7#)
- 1,5	Stabilizers raised	4,7 (7,7#)	2,5 (5,0)	1,7 (3,2)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,5 (7,7#) 7,5 (7,7#) 7,7# (7,7#)	2,9 (7,0#) 3,9 (7,0#) 5,1 (7,0#)	1,9 (5,0#) 2,5 (5,0#) 3,3 (5,0#)	
- 3,0	Stabilizers raised	4,9 (9,1#)	2,6 (5,0)		
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,6 (9,1#) 7,7 (9,1#) 9,1# (9,1#)	3,0 (6,1#) 3,9 (6,1#) 5,1 (6,1#)		
- 4,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				

with stick 2,65 m					
Height m	Undercarriage	Radius of load from centerline of machine in m			
		3,0	4,5	6,0	7,5
7,5	Stabilizers raised				
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down				
6,0	Stabilizers raised			2,1# (2,1#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,1# (2,1#) 2,1# (2,1#) 2,1# (2,1#)	
4,5	Stabilizers raised			2,2 (3,1#)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down			2,4 (3,1#) 3,1# (3,1#) 3,1# (3,1#)	
3,0	Stabilizers raised	6,3 (7,3#)	3,3 (4,9#)	2,0 (3,6)	1,3 (2,0#)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	7,1 (7,3#) 7,3# (7,3#) 7,3# (7,3#)	3,7 (4,9#) 4,7 (4,9#) 4,9# (4,9#)	2,3 (4,0#) 2,9 (4,0#) 3,7 (4,0#)	1,5 (2,0#) 2,0 (2,0#) 2,0# (2,0#)
1,5	Stabilizers raised	5,1 (6,5#)	2,9 (5,4)	1,8 (3,4)	1,2 (2,4)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,9 (6,5#) 6,5# (6,5#) 6,5# (6,5#)	3,3 (6,2#) 4,2 (6,2#) 5,5 (6,2#)	2,1 (4,5#) 2,7 (4,5#) 3,5 (4,5#)	1,4 (2,6#) 1,9 (2,6#) 2,4 (2,6#)
0	Stabilizers raised	4,7 (5,7#)	2,6 (5,1)	1,7 (3,2)	1,2 (2,3)
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,4 (5,7#) 5,7# (5,7#) 5,7# (5,7#)	3,0 (6,9#) 3,9 (6,9#) 5,2 (6,9#)	1,9 (4,9#) 2,6 (4,9#) 3,3 (4,9#)	1,3 (2,4#) 1,8 (2,4#) 2,3 (2,4#)
- 1,5	Stabilizers raised	4,7 (7,4#)	2,5 (4,9)	1,6 (3,2)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,4 (7,4#) 7,4# (7,4#) 7,4# (7,4#)	2,9 (7,0#) 3,8 (7,0#) 5,0 (7,0#)	1,9 (5,0#) 2,5 (5,0#) 3,2 (5,0#)	
- 3,0	Stabilizers raised	4,8 (9,4#)	2,5 (5,0)	1,7 (3,2)	
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down	5,5 (9,4#) 7,6 (9,4#) 9,4# (9,4#)	2,9 (6,3#) 3,9 (6,3#) 5,1 (6,3#)	1,9 (4,3#) 2,5 (4,3#) 3,3 (4,3#)	
- 4,5	Stabilizers raised		2,7 (4,1#)		
	Stabil. blade down 2 pt. outr. down Blade + 2 pt. down		3,1 (4,1#) 4,1 (4,1#) 4,1# (4,1#)		

The lift capacities are stated in metric tonnes (t) on the backhoe bucket's load hook, and can be lifted 360° on firm, level supporting surface with blocked oscillating axle. Capacities shown in brackets are valid when the undercarriage is in longitudinal position and are established over the steering axle (travel position) with stabilizers raised, and over rigid axle with stabilizers down. Indicated loads are based on ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity (#). Maximum load for the backhoe bucket's load hook is 8 t. Without bucket (0,50 m³), the lift capacities will increase by 400 kg, without bucket cylinder, link and lever they increase by an additional 219 kg. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook. According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device and automatic check valves on the hoist cylinders, when they are used for lifting operations which require the use of lifting accessories.

Lift Capacities A 316 Litronic® with Adjustable Offset Boom 4,90 m

Digging Envelope

- 1 stick 2,25 m
- 2 stick 2,45 m
- 3 stick 2,65 m

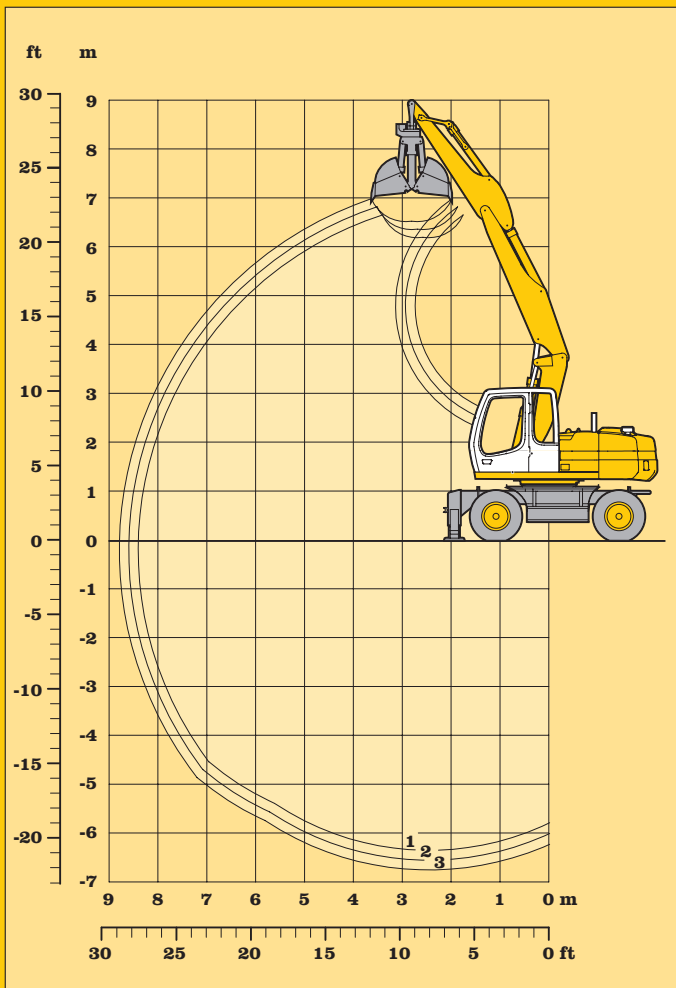
Stick length	m	2,25	2,45	2,65
Max. digging depth	m	6,30	6,50	6,70
Max. reach at ground level	m	8,35	8,55	8,75
Max. dumping height	m	6,15	6,30	6,45

Clamshell model:	8 B	10 B
Max. tooth force:	52 kN (5,3 t)	73 kN (7,4 t)
Max. torque of hydr. swivel:	1,40 kNm	1,76 kNm

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 3,40 m, stick 2,25 m and clamshell model 10 B/0,45 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	16300
A 316 Litronic with 2 pt. outriggers	16400
A 316 Litronic with stabil. blade + 2 pt. outr.	16900



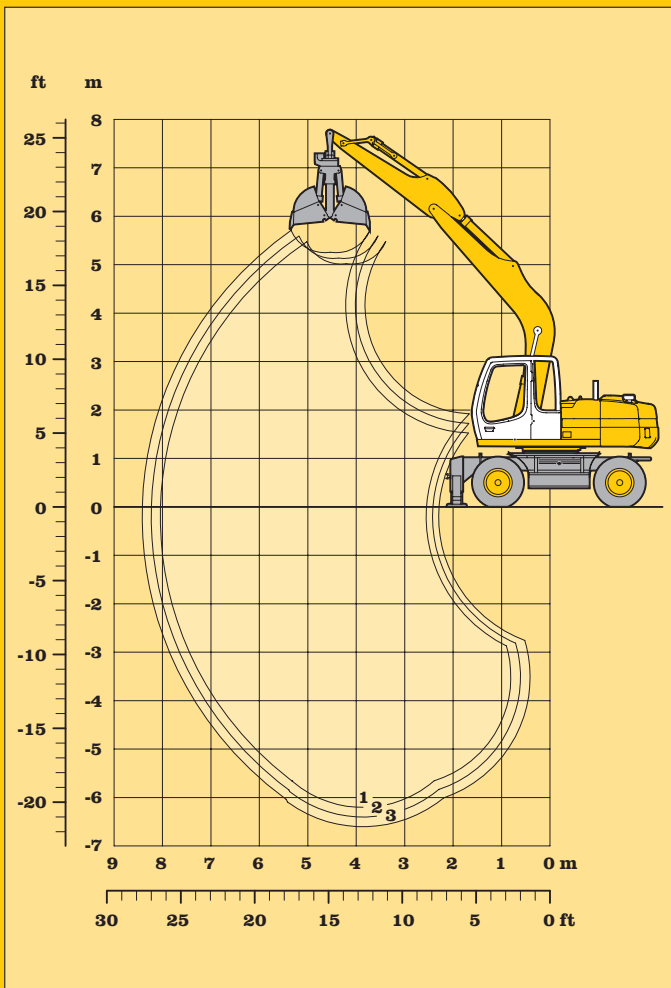
Clamshell Model 8 B

		without ejector					with ejector			
		320	400	600	800	1000	320	400	600	800
Width of shells	mm	320	400	600	800	1000	320	400	600	800
Capacity	m ³	0,17	0,22	0,30	0,40	0,80	0,17	0,22	0,30	0,40
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,2	1,8	1,8	1,8	1,8
Weight incl. suspension and hydr. swivel	kg	710	750	750	800	900	760	810	830	890
For machine stability per ISO 10567 the max. stick length is:										
Stabilizers raised	m	2,65	2,65	2,65	2,05	-	2,65	2,65	2,45	-
Stabilizer blade down	m	2,65	2,65	2,65	2,45	-	2,65	2,65	2,65	2,25
2 point outriggers down	m	2,65	2,65	2,65	2,45	2,05	2,65	2,65	2,65	2,45
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,65	2,45	2,05	2,65	2,65	2,65	2,45

Clamshell Model 10 B

		without ejector						with ejector			
		320	400	600	800	1000	1000	320	400	600	800
Width of shells	mm	320	400	600	800	1000	1000	320	400	600	800
Capacity	m ³	0,17	0,22	0,35	0,45	0,60	1,00	0,17	0,22	0,35	0,45
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,8	1,2	1,8	1,8	1,8	1,8
Weight incl. suspension and hydr. swivel	kg	770	820	860	910	970	1040	820	880	950	1010
For machine stability per ISO 10567 the max. stick length is:											
Stabilizers raised	m	2,65	2,65	2,05	-	-	-	2,65	2,65	-	-
Stabilizer blade down	m	2,65	2,65	2,45	2,05	-	-	2,65	2,65	2,25	-
2 point outriggers down	m	2,65	2,65	2,45	2,25	-	-	2,65	2,65	2,45	2,05
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,45	2,25	-	-	2,65	2,65	2,45	2,05

Clamshell Attachment with Hydr. Adjustable Boom



Digging Envelope

- 1 stick 2,25 m
- 2 stick 2,45 m
- 3 stick 2,65 m

Stick length	m	2,25	2,45	2,65
Max. digging depth	m	6,25	6,45	6,65
Max. reach at ground level	m	8,05	8,25	8,45
Max. dumping height	m	5,05	5,15	5,25

Clamshell model:	8 B	10 B
Max. tooth force:	52 kN (5,3 t)	73 kN (7,4 t)
Max. torque of hydr. swivel:	1,40 kNm	1,76 kNm

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, gooseneck boom 4,80 m, stick 2,25 m and clamshell model 10 B/0,45 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	15800
A 316 Litronic with 2 pt. outriggers	15850
A 316 Litronic with stabil. blade + 2 pt. outr.	16500

Clamshell Model 8 B

		without ejector					with ejector			
		320	400	600	800	1000	320	400	600	800
Width of shells	mm	320	400	600	800	1000	320	400	600	800
Capacity	m ³	0,17	0,22	0,30	0,40	0,80	0,17	0,22	0,30	0,40
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,2	1,8	1,8	1,8	1,8
Weight incl. suspension and hydr. swivel	kg	710	750	750	800	900	760	810	830	890
For machine stability per ISO 10567 the max. stick length is:										
Stabilizers raised	m	2,65	2,65	2,45	2,25	-	2,65	2,65	2,45	2,05
Stabilizer blade down	m	2,65	2,65	2,45	2,25	-	2,65	2,65	2,45	2,05
2 point outriggers down	m	2,65	2,65	2,45	2,25	-	2,65	2,65	2,45	2,05
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,45	2,25	-	2,65	2,65	2,45	2,05

Clamshell Model 10 B

		without ejector						with ejector			
		320	400	600	800	1000	1000	320	400	600	800
Width of shells	mm	320	400	600	800	1000	1000	320	400	600	800
Capacity	m ³	0,17	0,22	0,35	0,45	0,60	1,00	0,17	0,22	0,35	0,45
Max. material weight	t/m ³	1,8	1,8	1,8	1,8	1,8	1,2	1,8	1,8	1,8	1,8
Weight incl. suspension and hydr. swivel	kg	770	820	860	910	970	1040	820	880	950	1010
For machine stability per ISO 10567 the max. stick length is:											
Stabilizers raised	m	2,65	2,65	2,25	-	-	-	2,65	2,65	2,05	-
Stabilizer blade down	m	2,65	2,65	2,25	2,05	-	-	2,65	2,65	2,25	-
2 point outriggers down	m	2,65	2,65	2,25	2,05	-	-	2,65	2,65	2,25	-
Stabilizer blade + 2 pt. outr. down	m	2,65	2,65	2,25	2,05	-	-	2,65	2,65	2,25	-

Clamshell Attachment with Gooseneck Boom 4,80 m

Digging Envelope

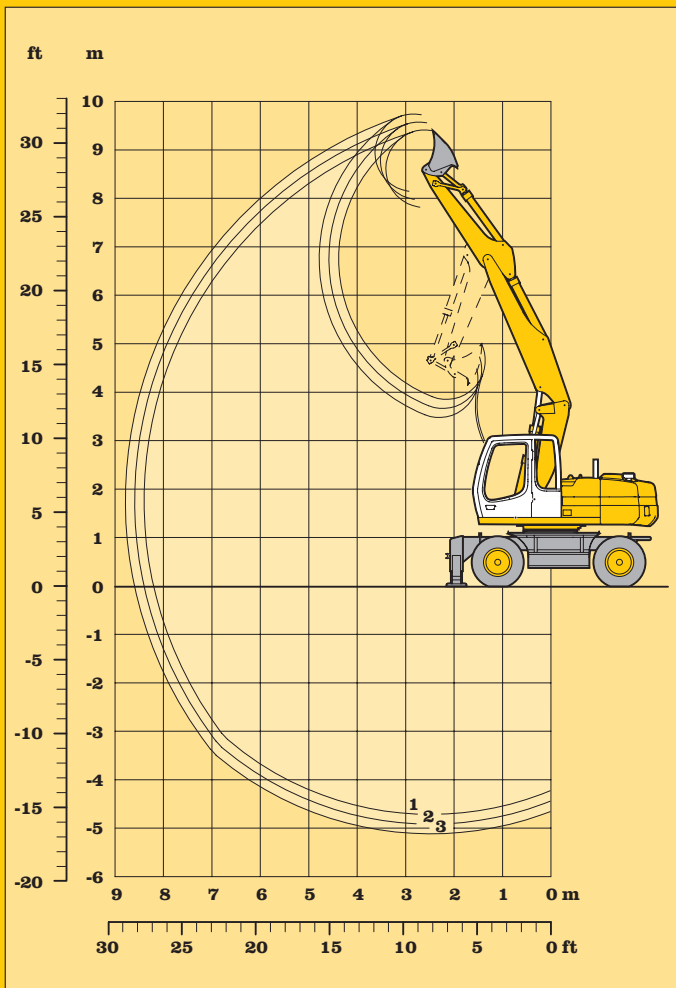
- 1 stick 2,25 m
- 2 stick 2,45 m
- 3 stick 2,65 m

Stick length	m	2,25	2,45	2,65
Max. digging depth	m	4,65	4,85	5,05
Max. reach at ground level	m	8,15	8,35	8,55
Max. dumping height	m	7,80	7,95	8,15
Max. teeth height	m	9,40	9,55	9,70

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 3,40 m, stick 2,25 m and ditchcleaning bucket 2000 mm/0,50 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	15700
A 316 Litronic with 2 pt. outriggers	15800
A 316 Litronic with stabil. blade + 2 pt. outr.	16400

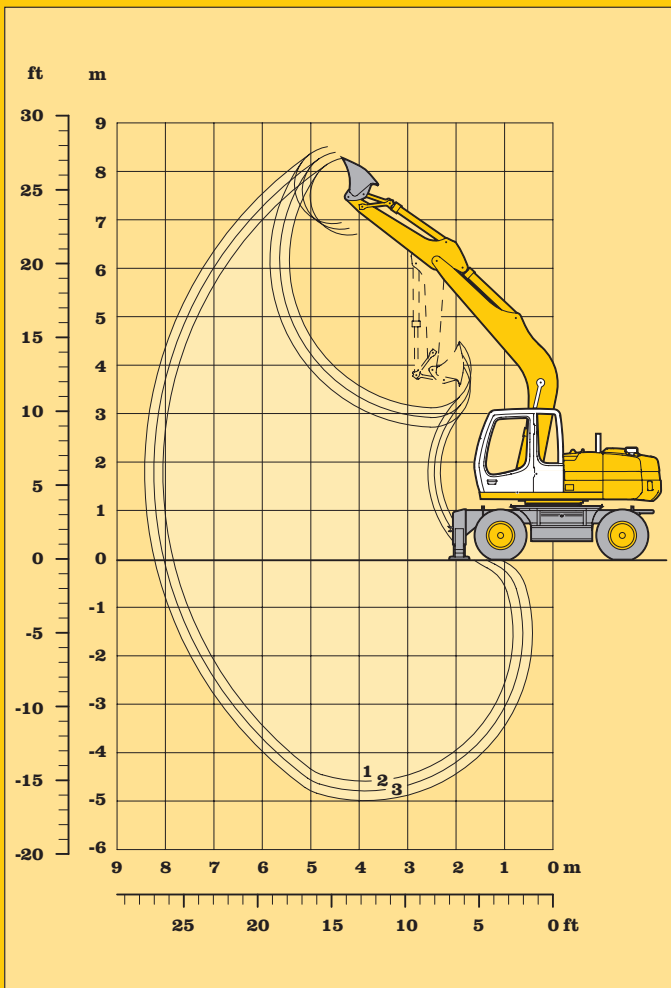


Ditchcleaning Buckets

Cutting width	mm	1700	2000 ¹⁾	2000	2000 (with 2 x 45° rotator)
Capacity ISO 7451	m ³	0,30	0,50	0,65	0,50
Max. material weight	t/m ³	1,8	1,8	1,8	1,8
Weight of bucket	kg	280	330	360	570
For machine stability per ISO 10567 the max. stick length is:					
Stabilizers raised	m	2,65	2,65	2,05	2,05
Stabilizer blade down	m	2,65	2,65	2,45	2,45
2 point outriggers down	m	2,65	2,65	2,45	2,45
Blade + 2-pt. outr. down	m	2,65	2,65	2,45	2,45

¹⁾ Bucket for narrow bottomed ditches

Ditchcleaning Attachment with Hydr. Adjustable Boom



Digging Envelope

- 1 stick 2,25 m
- 2 stick 2,45 m
- 3 stick 2,65 m

Stick length	m	2,25	2,45	2,65
Max. digging depth	m	4,60	4,80	5,00
Max. reach at ground level	m	7,85	8,05	8,25
Max. dumping height	m	6,70	6,80	6,90
Max. teeth height	m	8,25	8,40	8,50

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, gooseneck boom 4,80 m, stick 2,25 m and ditchcleaning bucket 2000 mm/0,50 m³.

Undercarriage versions	kg
A 316 Litronic with stabilizer blade	15200
A 316 Litronic with 2 pt. outriggers	15250
A 316 Litronic with stabil. blade + 2 pt. outr.	15900

Ditchcleaning Buckets

Cutting width	mm	1700	2000 ¹⁾	2000	2000 (with 2 x 45° rotator)
Capacity ISO 7451	m ³	0,30	0,50	0,65	0,50
Max. material weight	t/m ³	1,8	1,8	1,8	1,8
Weight of bucket	kg	280	330	360	570
For machine stability per ISO 10567 the max. stick length is:					
Stabilizers raised	m	2,65	2,65	2,25	2,25
Stabilizer blade down	m	2,65	2,65	2,25	2,25
2 point outriggers down	m	2,65	2,65	2,25	2,25
Blade + 2-pt. outr. down	m	2,65	2,65	2,25	2,25

¹⁾ Bucket for narrow bottomed ditches

Ditchcleaning-Attachment with Gooseneck Boom 4,80 m

Undercarriage

	Standard	Optional
Two circuit travel brake with accumulator	●	
Wide tires		●
Travel motor protection		●
Clam travel bracket with outriggers/prop-up blade down on one side only	●	
Creeper speed electrically switchable from cab	●	
New tires	●	
Service free parking brake inside transmission	●	
Independent outrigger control		●
Choice of tires		●
Auto check valve directly on each stabilizer cylinder	●	
Proportional power steering with mechanical back up	●	
Customized colors		●
Lockable storage box		
Two lockable storage boxes	●	
Lockable storage box additional		
Two-speed power shift transmission	●	

Uppercarriage

	Standard	Optional
Electric fuel tank filler pump		●
Maintenance-free swing brake lock	●	
Handrails, Non slip surfaces	●	
Main switch for electric circuit	●	
Engine hood with lift help	●	
Pedal controlled positioning swing brake	●	
Reverse travel warning system		
Sound insulation	●	
Customized colors		●
Pin lock upper/lower	●	
Maintenance-free HD-batteries	●	
Extended tool kit		●
Lockable tool box	●	
Tool kit	●	

Hydraulics

	Standard	Optional
Hydraulic tank shut-off valve	●	
Extra hydr. control for hydr. swivel	●	
Pressure compensation	●	
Hook up for pressure checks	●	
Pressure storage for controlled lowering of attachments with engine turned off	●	
Filter with partial micro filtration (5 µm)	●	
Electronic pump regulation	●	
Steppless mode system (ECO)	●	
Flow compensation	●	
Four mixed modes, can also be adjusted		
Full flow micro filtration		●
Bio degradable hydraulic oil		●
Pressure compensation		
Flow summation		
Additional hydraulic circuits		●

Engine

	Standard	Optional
Turbo charger	●	
Direct injection	●	
Cold start aid		●
Sensor controlled engine idling	●	
Air filter with pre-cleaner main- and safety element	●	

Operator's cab

	Standard	Optional
Storage tray	●	
Displays for engine operating condition	●	
Mechanical hour meters, readable from outside the cab	●	
Roof hatch	●	
All-round adjustable roof vent		
6-way adjustable seat	●	
Airpressure operator seat with heating and head-rest		●
Seat and consoles independently adjustable	●	
Extinguisher		
Removable customized foot mat	●	
Dome light	●	
Inside rear mirror	●	
Cab heater with defroster	●	
Cloth hook	●	
Air conditioning		●
Electric cool box		●
Steering wheel adjustable	●	
Bullet proof window (fixed installation - can not be opened)		●
Stereo radio		●
Preparation for radio installation		●
Rain hood over front window opening	●	
Beacon		●
All tinted windows	●	
Door with sliding window	●	
Optical and acoustical warning if outriggers are not fully retracted		●
Auxiliary heating		●
Sun shade	●	
Sun roller blind	●	
Electronic drive away lock		●
Wiper/washer	●	
Cigarette lighter and ashtray	●	
Additional flood lights		●

Attachment

	Standard	Optional
Flood lights on boom	●	
Offset feature for complete attachment		
Hydr. lines for clam operation on stick	●	
Sealed pivots	●	
Safety lift hook on hoe buckets	●	
Liebherr line of clams		●
Safety check valves on hoist cylinder		●
Safety check valves on stick cylinder		●
SAE-dbl flange connection for all hi-pressure lines	●	
Hose quick connection	●	
Centralized lube points	●	
Hydraulic or manual quick change tool adapter		●
Customized colors		●
Special buckets and other tools		●
Overload warning device		●
Two way valves for bucket/clam use	●	
Locking of connections for clam operation	●	
Y-flange seals at bucket/stick pivot		
Cylinders with shock absorber	●	

Options and/or special attachments, supplied by vendors other than Liebherr, are only to be installed with the knowledge and approval of Liebherr to retain warranty.