

Mining Excavator

R 996

Operating Weight	
with Backhoe Attachment:	659,000 kg / 1,452,800 lb
with Shovel Attachment:	672,000 kg / 1,482,827 lb
Engine Output:	2250 kW / 3000 hp
Bucket Capacity:	30,00 – 34,00 m ³ / 39.2 – 44.4 yd ³
Shovel Capacity:	29,00 – 34,00 m ³ / 37.9 – 44.4 yd ³



LIEBHERR

Technical Data



Engine

2 Cummins diesel engines

Rating per SAE J 1995	2240 kW (3000 hp) at 1800 rpm
Model	K 1800 E
Type	16 cylinder V-engine, water-cooled, direct injection, turbo-charged, after-cooler
Displacement	50,3 l/3069 in ³
Bore/Stroke	159/159 mm / 6.26/6.26 in
Air cleaner	dry-type air cleaner with pre-cleaner, with automatic dust ejector, primary and safety elements
Fuel tank	13 000 l/3440 gal
Electrical system	
Voltage	24 V
Batteries	8 x 170 Ah/12 V
Alternator	2 x 24 V/150 Amp
Engine idling	sensor controlled



Hydraulic System

Hydraulic pumps for attachment and travel drive	8 variable flow axial piston pumps
Max. flow	8 x 840 l/min. / 8 x 222 gpm
Max. hydr. pressure	320 bar/4,640 psi
Hydraulic pumps for swing drive	4 reversible swash plate pumps, closed-loop circuit
Max. flow	4 x 413 l/min. / 4 x 109 gpm
Max. hydr. pressure	350 bar/5,076 psi
Pump regulation	electro-hydraulic, pressure compensation, flow compensation, automatic oil flow optimizer
Hydraulic tank capacity	4600 l/1215 gal
Hydraulic system capacity	8200 l/2166 gal
Hydraulic oil filter	filtration of entire return flow, 1 high pressure filter for each main pump
Hydraulic oil cooler	2 separate coolers, 4 temperature controlled fans driven via hydraulic piston motors
Electronic engine speed sensing	over the entire engine RPM range
Lubrication	central lubrication system



Hydraulic Controls

Servo circuit	independent, electric over hydraulic proportional controls of each function
Emergency control	via accumulator for all attachment functions with stopped engine
Power distribution	via monoblock control valves with integrated primary relief valves and flanged on secondary valves for travel
Flow summation	to attachment and travel drive
Control functions	
Attachment and swing	proportional via joystick levers
Travel	proportional via foot pedals or hand levers
Bottom dump bucket	proportional via foot pedals
Operation with one engine possible	



Swing Drive

Hydraulic motor	4 Liebherr axial piston motors
Swing gear	4 Liebherr planetary reduction gears
Swing ring	Liebherr, sealed triple roller swing ring, internal teeth
Swing speed	0–3.5 rpm
Swing-Holding brake	hydraulically released, maintenance-free, multi-disc brakes integrated in each swing gear



Uppercarriage

Design	torque resistant designed upper frame in box type construction for superior strength and durability
Attachment mounting	parallel longitudinal main girders in box-section construction
Catwalks	on the right side with a hydraulically driven access ladder, additional emergency ladder in front of the cab



Service Flap

Design	hydraulically actuated service flap, easily accessible from ground level to allow: <ul style="list-style-type: none">– fuel fast refill– hydraulic oil refill– engine oil quick change– splitterbox oil quick change– swing gearbox oil quick change– swing ring gearing grease barrel refilling via grease filter– attachment/swing ring bearing grease barrel refilling via grease filter– windshield washer water refilling
Quick coupler	upon request

Technical Data



Operator's Cab

Design	resiliently mounted, sound insulated, large windows for all-around visibility, integrated falling object protection FOPS
Operator's seat	suspended, body-contoured with shock absorber, adjustable to operator's weight
Cabin windows	20,5 mm/0.8 in tinted armored glass for front window and left hand side windows, all other windows in tinted safety glass, high pressure windshieldwasher-system with 75 l/20 gal watertank, sun louvers on all windows in heavy duty design
Operator's eye level	7,85 m/25'75"
Heating system/ Air conditioning	heavy duty, high output air conditioner and heater unit
Cabin pressurization	ventilation unit with filters
Controls	joystick levers integrated into armrest of seat
Monitoring	via LCD-Display, data memory
Automatic engine shut off	in case of low engine oil pressure or low coolant level
Destroking of main pumps	in case of engine overheating or low hydraulic oil level
Safety functions	additional gauges with constant display for: engine speed, hourmeter, engine oil pressure, coolant temperature and hydraulic oil temperature



Undercarriage

Design	3-piece undercarriage, box type structures for center piece and side frames, stress relieved
Hydraulic motor	2 axial piston motors per side frame
Travel gear	Liebherr reduction gear
Travel speed	0-2,2 km/h / 0-1.4 mph
Parking brake	spring engaged, hydraulically released wet multi-disc brakes for each travel motor, maintenance-free
Track components	maintenance-free combined pad-link, heavy duty track shoes
Track rollers/ Carrier rollers	7/3
Automatic track tensioner	pressurized hydraulic cylinder with accumulator, maintenance free
Transport	undercarriage side frames are removable



Central Lubrication System

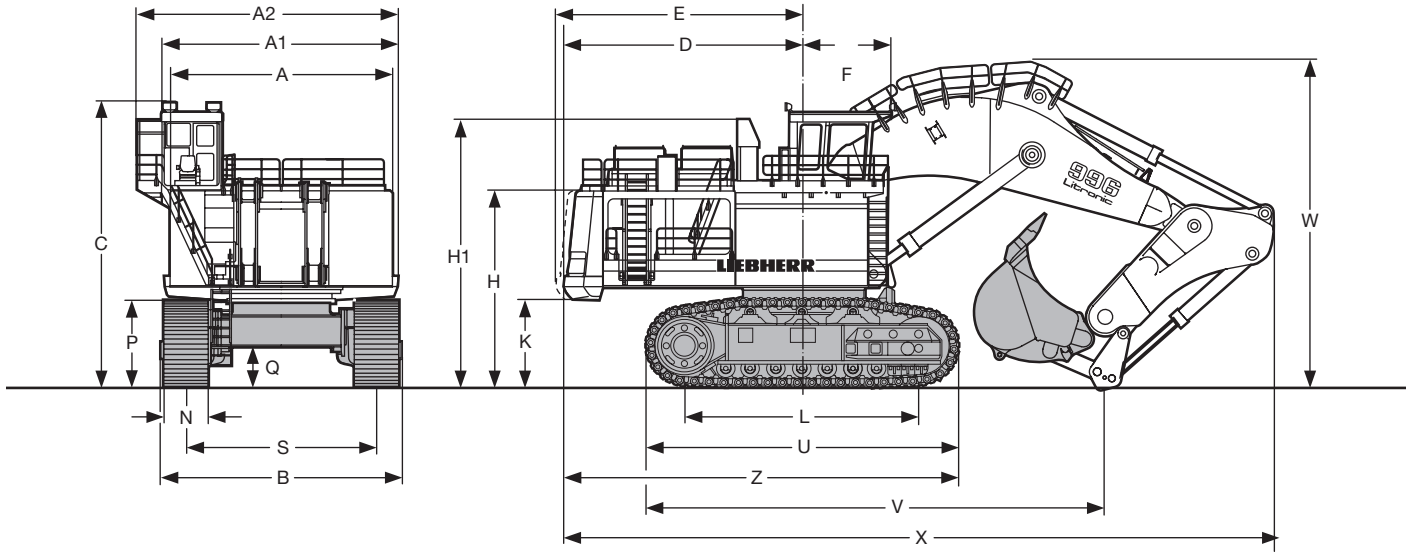
Type	Lincoln Centromatic lubrication system for the entire attachment and swing ring
Grease pumps	2 Lincoln Powermaster pumps with switch over function, plus 1 separate pump for swing ring teeth
Capacity	1 x 600 l/158.5 gal bulk container for attachment and swing ring, separated 1 x 80 l/21 gal grease drum for swing ring teeth



Attachment

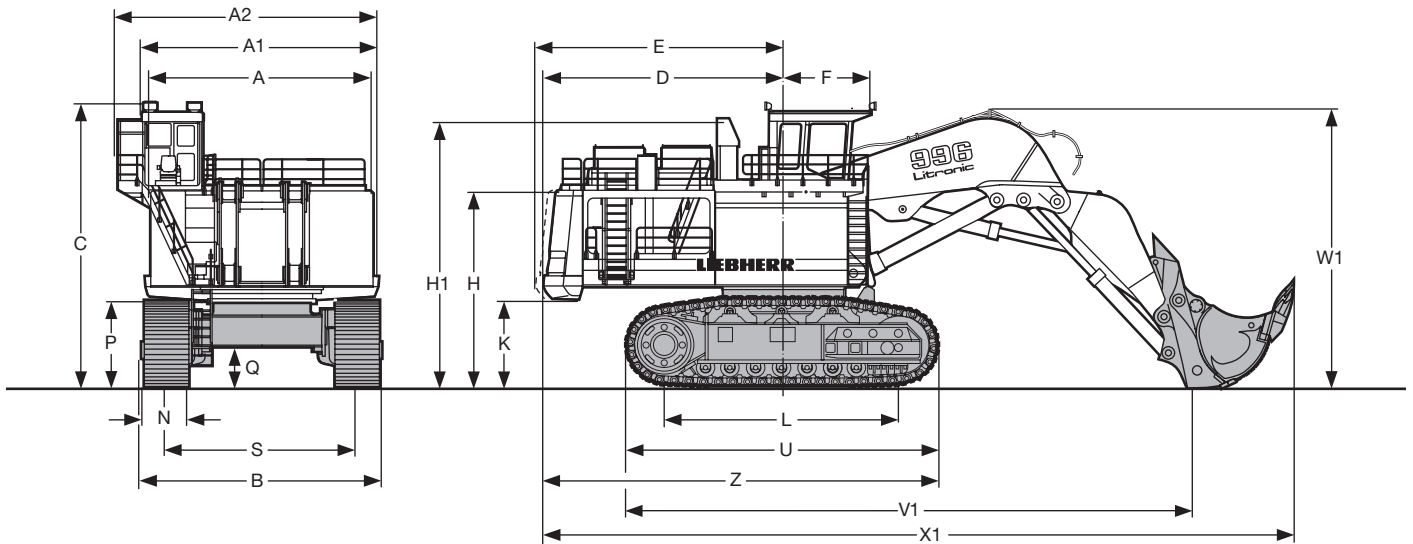
Design	box type structure with large steel castings in all high-stress areas
Pivots	sealed with double side centering with 1 single floating pin per side, all bearings with wear resistant, steel bushings, bolts hardened and chromium-plated
Hydraulic cylinders	Liebherr design, all cylinders located in well protected areas
Hydraulic connections	pipes and hoses equipped with SAE split flange connections
Kinematics	Liebherr parallel face shovel attachment geometry

Dimensions



	mm/ft in
A	7000/22' 11"
A1	7430/24' 4"
A2	8250/27' 1"
B	7650/25' 1"
C	9070/29' 9"
D	7650/25' 1"
E	7950/26' 1"
F	2780/ 9' 1"
H	6275/20' 7"
H1	8480/27' 10"
K	2845/ 9' 4"

	mm/ft in
L	7500/24' 7"
U	10000/32' 9"
P	2985/ 9' 9"
Q	1435/ 4' 8"
S	6000/19' 8"
N	1400/ 55"
W	9750/32'
V	14350/47' 1"
X	22600/74' 1"
Z	12465/40' 10"

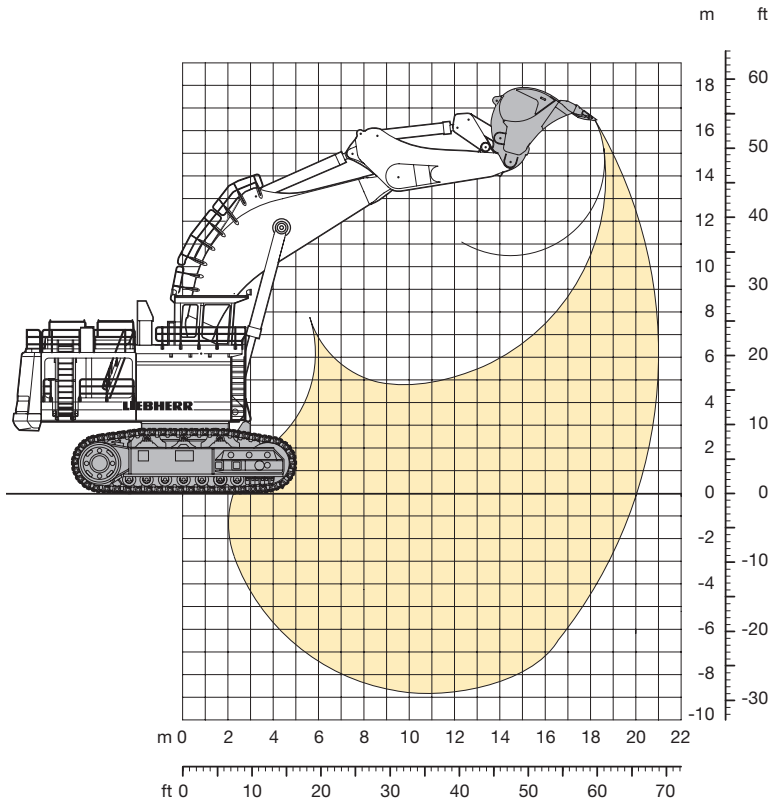


	mm/ft in
A	7000/22' 11"
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	mm/ft in
L	7500/24' 7"
U	10000/32' 9"
P	2985/ 9' 9"
Q	1435/ 4' 8"
S	6000/19' 8"
N	1400/ 55"
W1	8500/27' 10"
V1	17800/58' 4"
X1	23450/76' 11"
Z	12465/40' 10"

Backhoe Attachment

with Gooseneck Boom 11,75 m/38'6"



Digging Envelope

Stick	5,00 m/16' 4"
Max. reach at ground level	20,00 m/65' 7"
Max. teeth height	16,60 m/54' 5"
Max. dump height	10,50 m/34' 5"
Max. digging depth	8,80 m/28' 10"
Max. digging force	1500 kN (153,0 t)/337,213 lbf (337,307 lb)
Max. breakout force	1670 kN (170,2 t)/375,431 lbf (375,227 lb)

Operating Weight and Ground Pressure

The operating weight includes the basic machine with backhoe attachment and bucket 34,00 m³/44.4 yd³.

Pad width	mm/in	1400/55
Weight	kg/lb	659000/1,452,800
Ground pressure	kg/cm ² /psi	2,81/39.97

Bucket

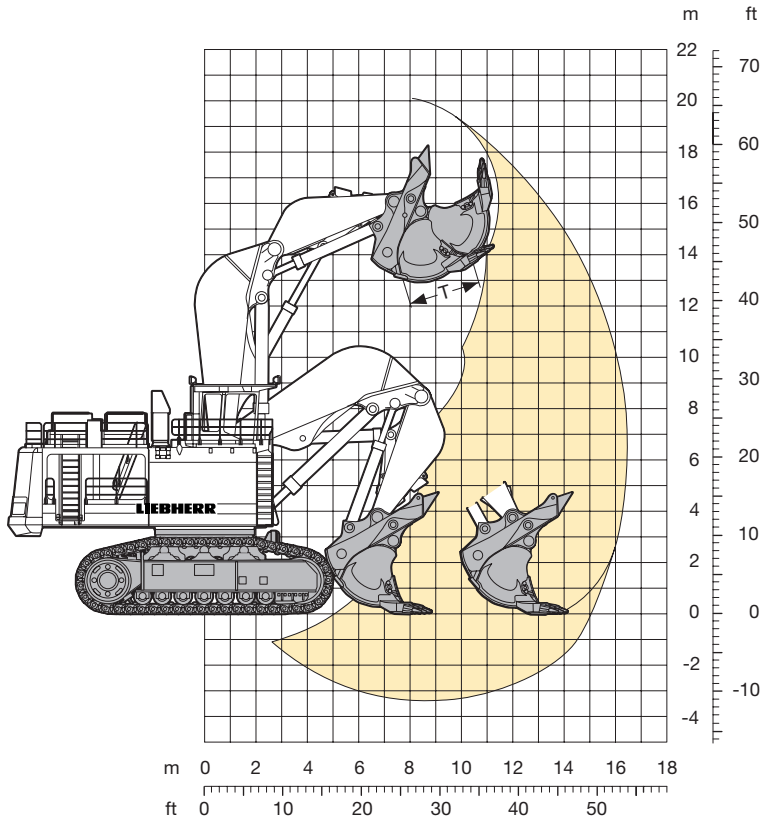
Cutting width SAE	mm/in	4800/189 ¹⁾	4800/189 ¹⁾
Capacity SAE heaped	m ³ /yd ³	30,00/39.2	34,00/44.4
Weight	kg/lb	39000/85,980	39400/86,870
Suitable for material up to a specific weight of	t/m ³ /lb/yd ³	2,00/3,370	1,80/3,000
Wear kit level		II	II

¹⁾ Bucket with delta cutting edge and tooth system Posilok size S 145.

Additional buckets on request.

Shovel Attachment

with Shovel Boom 8,00 m/26'3"



Digging Envelope

Shovel stick	5,00 m/16' 4"
Max. reach at ground level	15,09 m/51' 2"
Max. dump height	12,90 m/46'11"
Max. crowd length	5,38 m/21'
Bucket opening width T	2800 mm/110"
Crowd force	
at ground level	2300 kN (234,4 t)/517,061 lbf (516,763 lb)
Max. crowd force	2430 kN (247,6 t)/546,286 lbf (545,864 lb)
Max. breakout force	1905 kN (194,1 t)/428,261 lbf (427,917 lb)

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and bottom dump bucket 34,00 m³/44.4 yd³.

Pad width	mm/in	1400/55
Weight	kg/lb	672000/1,482,827
Ground pressure	kg/cm ² /psi	2,870/40.82

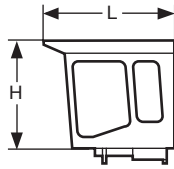
Bottom Dump Bucket

Cutting width SAE	mm/in	4700/185 ¹⁾	4700/185 ¹⁾	5500/217 ¹⁾
Capacity SAE heaped	m ³ /yd ³	29,00/37.9	31,00/40.55	34,00/44.4
Weight	kg/lb	58900/129,850	65100/143,520	64000/141,000
Suitable for material up to a specific weight of	t/m ³ /lb/yd ³	2,20/3,700	1,90/3,200	1,80/3,000
Wear kit level		II	III	II

¹⁾ Bottom dump bucket with delta cutting edge and tooth system Posilok size S 145

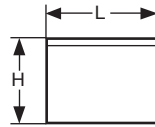
Additional bottom dump buckets on request.

Component Dimensions and Weights



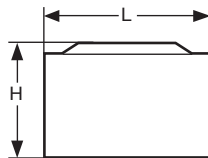
Cab

L Length	mm/ft in	3215/10' 6"
H Height	mm/ft in	2885/ 9' 6"
Width	mm/ft in	1900/ 6' 3"
Weight	kg/lb	2800/6,200



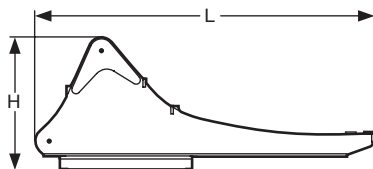
Cab Elevation with Fuel Tank

L Length	mm/ft in	4150/13' 7"
H Height	mm/ft in	3100/10' 2"
Width	mm/ft in	2700/ 8'10"
Weight	kg/lb	8000/17,650



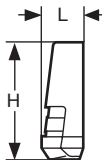
Powerpack Modules (two)

L Length	mm/ft in	5280/17' 4"
H Height	mm/ft in	3640/11'11"
Width	mm/ft in	2070/ 6' 9"
Weight	kg/lb	2 x 22000/2 x 48,500



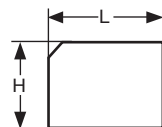
Rotation Deck (with swing ring, swing gears and control valve bracket)

L Length	mm/ft in	9750/32'
H Height	mm/ft in	4250/13'11"
Width	mm/ft in	4270/14'
Weight	kg/lb	83100/183,200



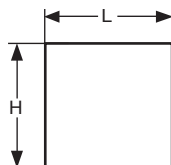
Counterweight

L Length	mm/ft in	1250/ 4' 1"
H Height	mm/ft in	3430/11' 3"
Width	mm/ft in	7360/24' 2"
Weight	kg/lb	60000/132,300



Hydraulic Oil Cooling with hydraulic tank without hydraulic oil

L Length	mm/ft in	4210/13'10"
H Height	mm/ft in	3100/10' 2"
Width	mm/ft in	2100/ 6'11"
Weight	kg/lb	8000/17,650



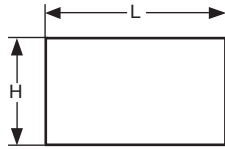
Compartment Panel (two)

L Length	mm/ft in	4145/13' 7"
H Height	mm/ft in	3100/10' 2"
Width	mm/ft in	950/ 3' 1"
Weight	kg/lb	2 x 1500/2 x 3,300

Hydraulic Oil

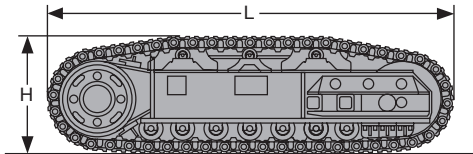
Weight	kg/lb	8000/17,640
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Component Dimensions and Weights



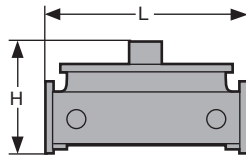
Miscellaneous

L Length	mm/ft in	4500/14' 9"
H Height	mm/ft in	2600/ 8' 6"
Width	mm/ft in	2000/ 6' 7"
Weight	kg/lb	5000/11,100



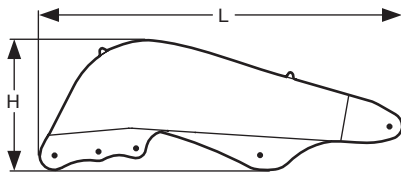
Side Frame (two)

L Length	mm/ft in	10000/32' 9"
H Height	mm/ft in	2985/ 9' 9"
Width over travel drive	mm/ft in	2700/ 8'11"
Width without travel drive	mm/ft in	2225/ 7' 4"
Weight	kg/lb	2 x 117000/2 x 258,000



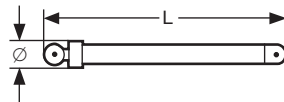
Undercarriage Central Girder

L Length	mm/ft in	4000/13' 1"
H Height	mm/ft in	2690/ 8'10"
Width	mm/ft in	4600/15' 1"
Weight	kg/lb	40000/88,200



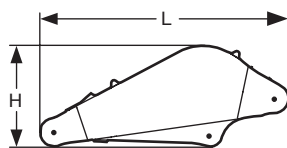
Shovel Boom

L Length	mm/ft in	8650/28' 4"
H Height	mm/ft in	3300/10'10"
Width	mm/ft in	3350/11'
Weight	kg/lb	59140/130,400



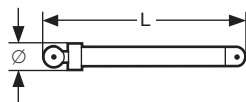
Hoist Cylinder (two)

L Length	mm/ft in	5430/17'10"
Ø Diameter	mm/in	600/ 24"
Weight	kg/lb	2 x 5910/2 x 13,050



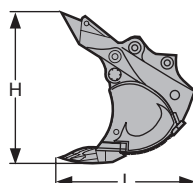
Shovel Stick

L Length	mm/ft in	5620/18' 5"
H Height	mm/ft in	2300/ 7' 6"
Width	mm/ft in	3350/11'
Weight	kg/lb	27150/59,850



Crowd Cylinder (two)

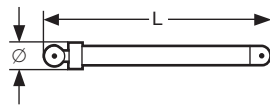
L Length	mm/ft in	3880/12' 9"
Ø Diameter	mm/in	490/ 19"
Weight	kg/lb	2 x 3430/2 x 7,560



Bottom Dump Bucket (including clam cylinders)

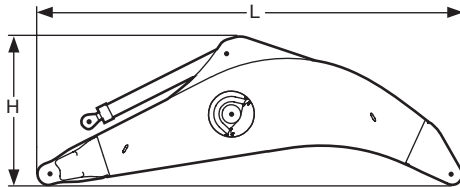
Cutting width	mm/in	4700/185"	4700/185"	5500/217"
Capacity	m ³ /yd ³	29,00/37.9	31,00/40.5	34,00/44.4
L Length	mm/ft in	4650/15'3"	4650/15'3"	4650/15'3"
H Height	mm/ft in	4500/14'9"	4500/14'9"	4500/14'9"
Width	mm/ft in	4700/15'5"	4700/15'5"	5500/18'
Weight	kg/lb	58900/129,850	65110/143,550	64000/141,000

Component Dimensions and Weights



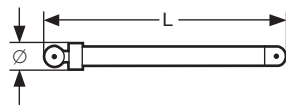
Bucket Tilt Cylinder (two)

L Length	mm/ft in	4690/15' 5"
Ø Diameter	mm/in	490/ 19"
Weight	kg/lb	2 x 3670/2 x 8,090



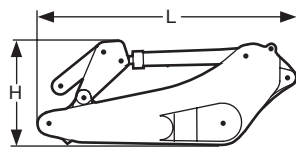
Gooseneck Boom with Two Stick Cylinders

L Length	mm/ft in	12500/41'
H Height	mm/ft in	4500/14' 9"
Width	mm/ft in	2800/ 9' 2"
Weight	kg/lb	68950/152,000



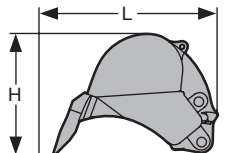
Hoist Cylinders (two)

L Length	mm/ft in	5430/17'10"
Ø Diameter	mm/in	600/ 24"
Weight	kg/lb	2 x 6060/2 x 13,360



Stick with Two Bucket Cylinders

L Length	mm/ft in	7500/24' 7"
H Height	mm/ft in	3300/ 9'10"
Width	mm/ft in	2500/ 8' 2"
Weight	kg/lb	42000/92,594



Backhoe Buckets

Cutting width	mm/in	4800/189"	4800/189"
Capacity	m ³ /yd ³	30,00/39.2	34,00/44.4
L Length	mm/ft in	4650/15' 3"	4650/15' 3"
H Height	mm/ft in	3150/10' 4"	3300/10'10"
Width	mm/ft in	4850/15'11"	4850/15'11"
Weight	kg/lb	39000/86,000	39400/86,862

All illustrations and data may differ from standard equipment. Subject to change without notice. All indicated loads are based in accordance with ISO 9248.

The Liebherr Group of Companies

Wide product range

The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's high-value products and services enjoy a high reputation in many other fields, too. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional customer benefit

Every product line provides a complete range of models in many different versions. With both its technical excellence and acknowledged quality, Liebherr products offer a maximum of customer benefits in practical application.

State-of-the-art technology

To provide consistent, top quality products, Liebherr attaches great importance to each product area, its components and core technologies. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for construction equipment.

Worldwide and independent

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a Group of 100 companies with over 30,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.com



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