

Mining Excavator **R 995**

Operating Weight with
Backhoe Attachment:
441 tonnes / 486 tons

Shovel Attachment:
450 tonnes / 496 tons

Engine:
1,600 kW / 2,140 HP

Bucket Capacity:
26.5 m³ / 34.7 yd³

Shovel Capacity:
26.5 m³ / 34.7 yd³



LIEBHERR

Technical Data



Engine

1 MTU diesel engine	
Rating per SAE J1995	1,600 kW (2,140 HP) at 1,800 rpm
Model	MTU 16 V 4000 E 20 (Tier 1)
Type	16 cylinder turbocharged V-engine after-cooled two separate water cooling circuits common-rail direct injection system
Bore/Stroke	165/190 mm / 6.5/7.48 in
Displacement	65 l/3,967 in ³
Engine cooling system	fans driven via hydraulic piston motor
Air cleaner	dry-type air cleaner with pre-cleaner, with automatic dust ejector, primary and safety elements
Fuel tank	10,000 l/2,640 gal
Engine idling	sensor controlled
Electrical system	
Voltage	24 V
Batteries	8 x 170 Ah/12 V
Alternator	24 V/240 Amp
Electronic engine control system	engine speed sensing over the entire engine RPM range. Provides integration of engine with other machine systems



Electro-Hydraulic Controls

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



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 – 3.7 rpm
Swing-holding brake	hydraulically released, maintenance-free, multi-disc brakes integrated in each swing gear



Hydraulic System

Hydraulic pump	6 variable flow axial piston pumps
for attachment and travel drive	
Max. flow	6 x 840 l/min./6 x 222 gpm
Max. pressure	320 bar/4,641 psi
for swing drive	4 reversible swashplate pumps, closed-loop circuit
Max. flow	4 x 361 l/min./4 x 95.4 gpm
Max. pressure	320 bar/4,641 psi
Pump management	electronically controlled pressure and flow management with oil flow optimisation
Hydraulic tank capacity	3,920 l/1,035 gal
Hydraulic system capacity	6,400 l/1,690 gal
Hydraulic oil filter	1 high pressure safety filter after each high pressure pump + fine filtration of entire return flow (15/5 µm)
Hydraulic oil cooler	2 separate coolers, 3 temperature controlled fans driven via hydraulic piston motors



Electric System

Electric isolation	easy accessible battery isolations
Working lights	high brightness halogen lights: – 4 on working attachment – 2 on LHS of uppercarriage – 2 on RHS of uppercarriage – 2 on counterweight Xenon lights in option
Emergency stop switches	at ground level, in hydraulic compartment, in engine compartment and in operator cab
Electrical wiring	heavy duty execution in IP 65 standard for operating conditions of –50 °C to 100 °C/–58 °F to 212 °F



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
Machine access	on the cab side with a hydraulically driven access ladder, additional emergency ladder in front of the cab



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 18 mm/0.7 in for right hand side windows, all other windows in tinted safety glass, high pressure windshield-washer system with 75 l/20 gal watertank, sun louvers on all windows in heavy duty design
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
Rear vision system	camera installation on counterweight and right-hand side of the uppercarriage displayed over an additional LCD-display
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, hydraulic oil temperature
Noise level (ISO 6396)	L_{pA} (inside cab) = 77 dB(A) with oil/water fans at 100 % and AC fan at 65 %



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 planetary reduction gear
Travel speed	0 – 2.7 km/h/0 – 1.67 mph
Parking brake	spring engaged, hydraulically released wet multi-disc brakes for each travel motor, maintenance-free
Track components	maintenance-free combined pad-link, shovel style double grouser pad
Track rollers / Carrier rollers	7/3 per side frame
Automatic track tensioner	pressurized hydraulic cylinder, 1 per side frame with accumulator, maintenance-free
Transport	undercarriage side frames are removable



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 teeth grease barrel refilling via grease filter – attachment/swing ring bearing grease barrel refilling via grease filter – windshield washer water refilling quick coupler upon request
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Central Lubrication System

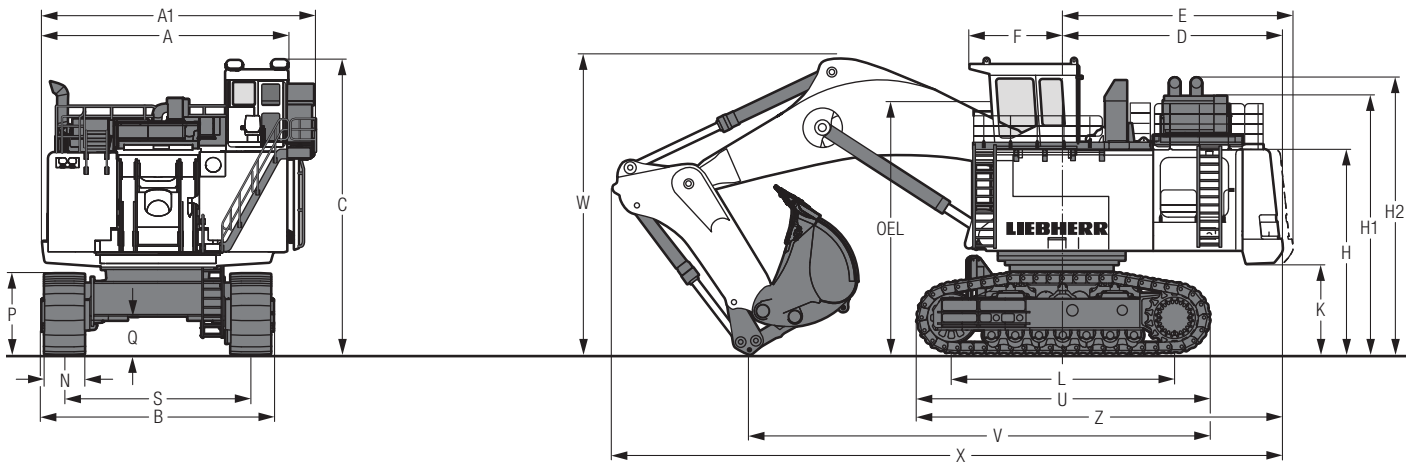
Type	Lincoln Centromatic lubrication system for the entire attachment/swing ring bearing and teeth
Grease pumps	2 Lincoln Powermaster pumps with switch over function, 1 Lincoln Flowmaster pump for swing ring teeth lubrication
Capacity	600 l/158 gal bulk container for attachment/swing ring bearing, separated 80 l/21 gal container for swing ring teeth
Refill	via the service flap for both containers with grease filters



Attachment

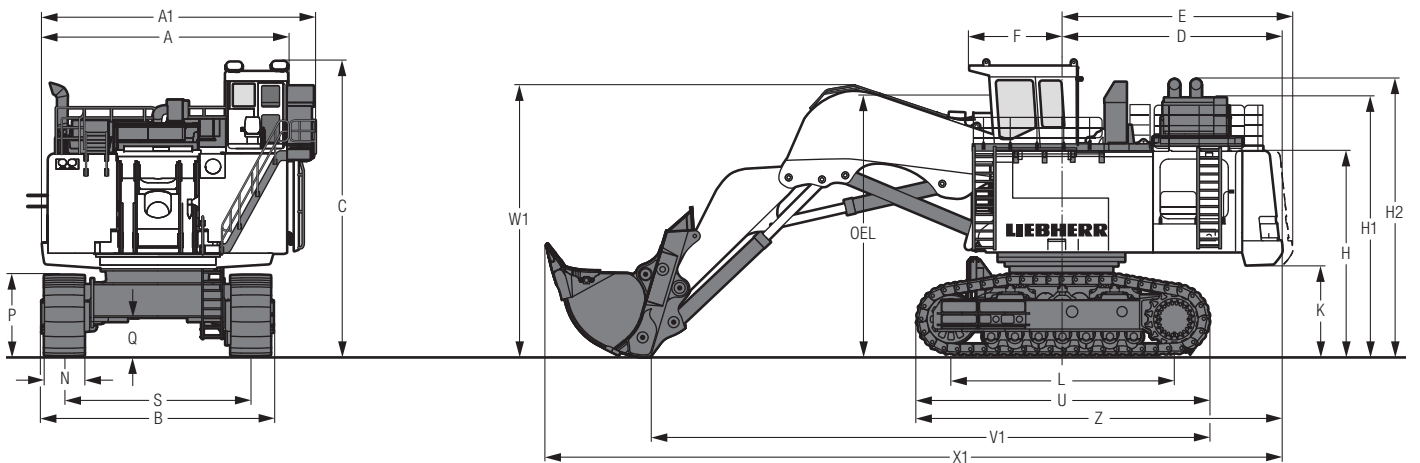
Design	box-type structure with large steel castings in all high-stress areas
Pivots	sealed with double side centering with 1 single floating pin per side, all bearings with wear resistant steel bushings, bolts hardened and chromium-plated
Hydraulic cylinders	Liebherr design, all cylinders located in 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	7,400/24' 3"
A1	8,230/26'11"
B	6,960/22' 9"
C	8,820/28'11"
D	6,590/21' 7"
E	6,900/22' 7"
F	2,810/ 9' 2"
H	6,025/19' 9"
H1	7,620/24'11"
H2	8,170/26' 9"
K	2,600/ 8' 6"

	mm/ft in
L	6,700/21'11"
N	1,200/ 3'11"
P	2,505/ 8' 2"
Q	1,186/ 3'10"
S	5,600/18' 4"
U	8,877/29' 1"
V	13,200/43' 4"
W	9,100/29'10"
X	19,600/64' 3"
Z	11,000/36'
OEL	Operator's eye level 7,450/24' 5"

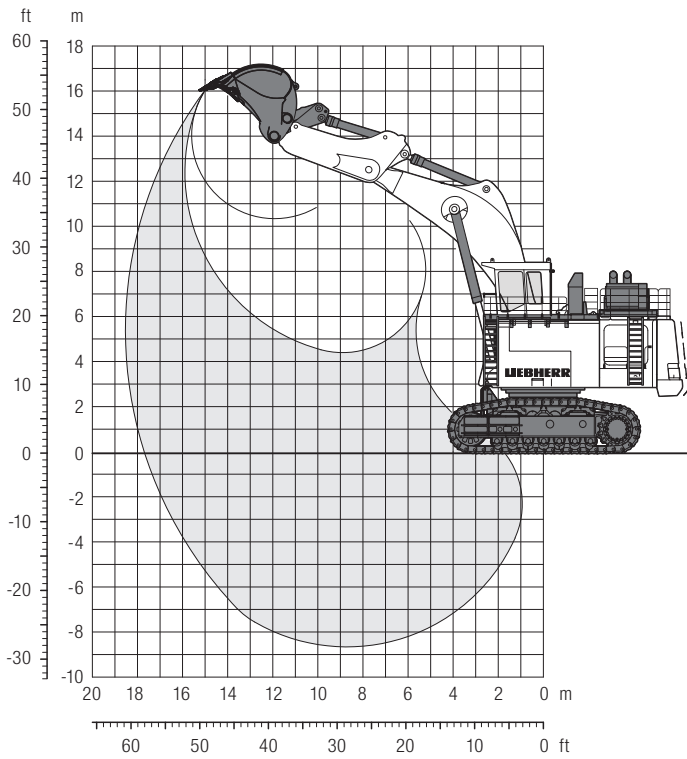


	mm/ft in
A	7,400/24' 3"
A1	8,850/29'
B	6,960/22' 9"
C	8,820/28'11"
D	6,590/21' 7"
E	6,900/22' 7"
F	2,810/ 9' 2"
H	6,025/19' 9"
H1	7,620/24'11"
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	mm/ft in
L	6,700/21'11"
N	1,200/ 3'11"
P	2,505/ 8' 2"
Q	1,186/ 3'10"
S	5,600/18' 4"
U	8,877/29' 1"
V1	17,000/55' 9"
W1	8,000/26' 2"
X1	22,100/72' 5"
Z	11,000/36'
OEL	Operator's eye level 7,450/24' 5"

Backhoe Attachment

with Mono Boom 10.00 m/32'10"



Digging Envelope

Stick length	4.50 m/14'9"
Max. digging depth	8.60 m/28'2"
Max. reach at ground level	17.80 m/58'4"
Max. dumping height	10.50 m/34'5"
Max. teeth height	16.30 m/53'5"
Max. digging force (ISO 6015)	1,170 kN/263,026 lbf
Max. breakout force (ISO 6015)	1,300 kN/292,252 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with backhoe attachment and backhoe bucket 26.50 m³/34.7 yd³.

Pad width	mm/ft in	1,200/3'11"
Weight	kg/lb	441,000/972,200
Ground pressure*	kg/cm ² /psi	2.55/36.16

* according to ISO 16754

Backhoe Buckets

For materials class according to VOB, Section C, DIN 18300	< 5	< 5	5 – 6	5 – 6	5 – 6	7 – 8
Typical operation according to VOB Section C, DIN 18300	GP	GP	HD	HD	HD	XHD
Capacity ISO 7451	m ³	28.00	25.00	28.00	26.50	24.00
	yd ³	36.6	32.7	36.6	34.7	31.4
Suitable for material up to a specific weight of	t/m ³	1.7	2.0	1.6	1.8	2.1
	lb/yd ³	2,867	3,373	2,698	3,035	3,541
Cutting width	mm	4,300	4,300	4,300	4,300	4,300
	ft in	14'1"	14'1"	14'1"	14'1"	14'1"
Weight	kg	30,000	27,500	32,000	30,100	27,600
	lb	66,139	60,627	70,548	66,359	60,848

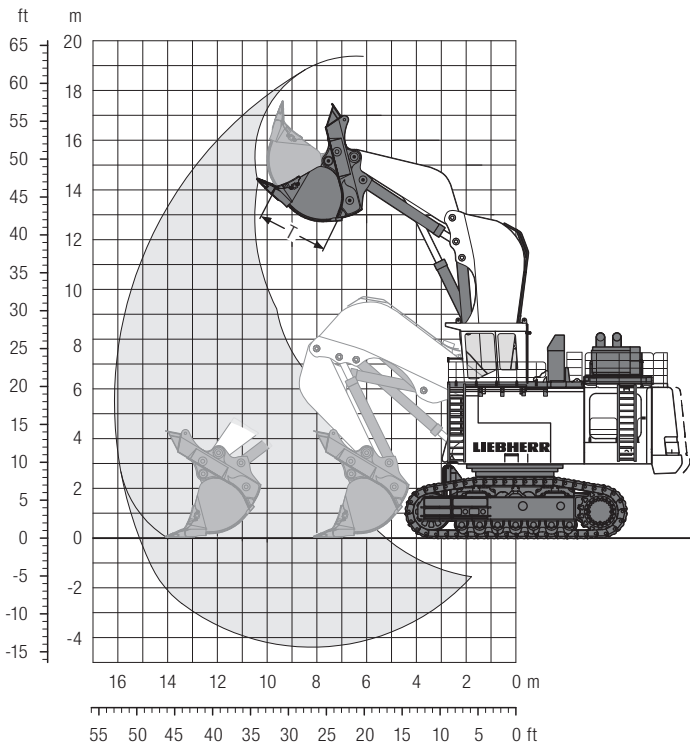
GP: General purpose bucket with Esco S110 teeth

HD: Heavy-duty bucket with Esco S110 teeth

XHD: Heavy-duty rock bucket with Esco S130 teeth

Face Shovel Attachment

with Shovel Boom 7.60 m / 24'11"



Digging Envelope

Stick length	4.60 m / 15' 1"
Max. reach at ground level	15.15 m / 49' 8"
Max. dumping height	12.80 m / 41'11"
Max. crowd length	6.00 m / 19' 8"
Bucket opening width T	2.80 m / 9' 2"
<hr/>	
Crowd force at ground level (ISO 6015)	1,360 kN / 305,740 lbf
Max. crowd force (ISO 6015)	1,600 kN / 359,694 lbf
Max. breakout force (ISO 6015)	1,330 kN / 298,995 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and bucket 26.50 m³ / 34.7 yd³.

Pad width	mm / ft in	1,200 / 3'11"
Weight	kg / lb	450,000 / 992,100
Ground pressure*	kg/cm ² / psi	2.59 / 36.73

* according to ISO 16754

Face Shovel Buckets

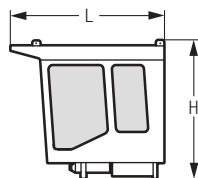
For materials class according to VOB, Section C, DIN 18300	< 5	5 – 6	5 – 6	7 – 8
Typical operation according to VOB Section C, DIN 18300	GP	HD	HD	XHD
Capacity ISO 7451				
	m ³	28.00	26.50	24.00
	yd ³	36.6	34.7	31.4
Suitable for material up to a specific weight of				
	t/m ³	1.7	1.8	2.0
	lb/yd ³	2,867	3,035	3,373
Cutting width				
	mm	4,300	4,300	4,300
	ft in	14'1"	14'1"	14'1"
Weight				
	kg	45,400	45,200	44,700
	lb	100,090	99,649	98,547

GP: General purpose bucket with Esco S110 teeth

HD: Heavy-duty bucket with Esco S110 teeth

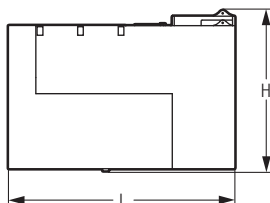
XHD: Heavy-duty rock bucket with Esco S130 teeth

Dimensions and Weights



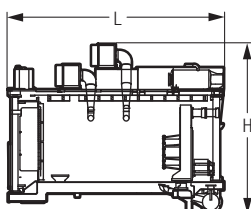
Cab

L	Length	mm / ft in	3,215 / 10'6"
H	Height	mm / ft in	2,885 / 9'5"
	Width	mm / ft in	1,900 / 6'2"
	Weight	kg / lb	2,600 / 5,732



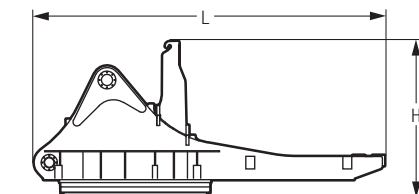
Cab Elevation with Fuel Tank

L	Length	mm / ft in	4,755 / 15' 7"
H	Height	mm / ft in	3,400 / 11' 1"
	Width	mm / ft in	3,015 / 9'10"
	Weight	kg / lb	10,250 / 22,597



Powerpack Modules

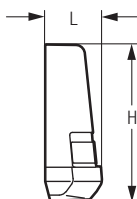
L	Length	mm / ft in	5,720 / 18'9"
H	Height	mm / ft in	4,500 / 14'9"
	Width	mm / ft in	2,650 / 8'8"
	Weight	kg / lb	24,250 / 53,462



Rotation Deck

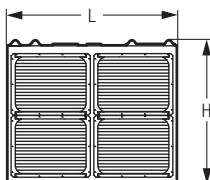
with swing ring, swing gears and control valve bracket

L	Length	mm / ft in	8,700 / 28'6"
H	Height	mm / ft in	3,900 / 12'9"
	Width	mm / ft in	4,000 / 13'1"
	Weight	kg / lb	56,800 / 125,222



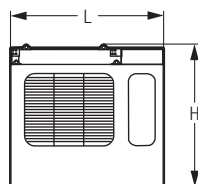
Counterweight

L	Length	mm / ft in	1,250 / 4' 1"
H	Height	mm / ft in	3,430 / 11' 3"
	Width	mm / ft in	6,970 / 22'10"
	Weight	kg / lb	44,000 / 97,003



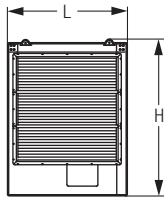
Hydraulic Oil Cooling

L	Length	mm / ft in	3,650 / 11'11"
H	Height	mm / ft in	3,150 / 10' 3"
	Width	mm / ft in	2,100 / 6'10"
	Weight	kg / lb	7,700 / 16,976



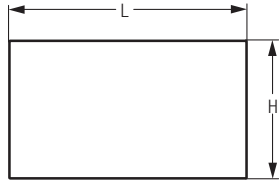
Compartment Panel Right

L	Length	mm / ft in	3,800 / 12'5"
H	Height	mm / ft in	3,500 / 11'5"
	Width	mm / ft in	830 / 2'8"
	Weight	kg / lb	1,500 / 3,307



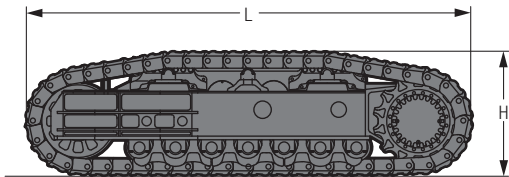
Compartment Panel Left with Rotary Ladder

L	Length	mm/ft in	2,650/ 8'8"
H	Height	mm/ft in	3,500/11'5"
	Width	mm/ft in	860/ 2'9"
	Weight	kg/lb	1,800/3,968



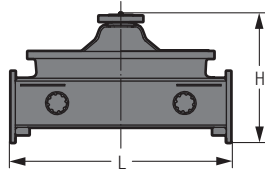
Miscellaneous

L	Length	mm/ft in	4,500/14'9"
H	Height	mm/ft in	2,600/ 8'6"
	Width	mm/ft in	2,000/ 6'6"
	Weight	kg/lb	5,000/11,023



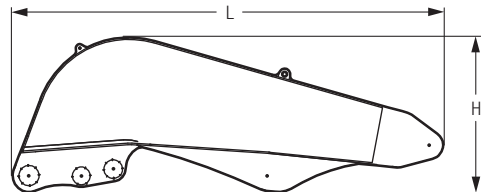
Side Frame (two)

L	Length	mm/ft in	8,800/28'10"
H	Height	mm/ft in	2,500/ 8' 2"
	Width over travel drive	mm/ft in	1,800/ 5'10"
	Width without travel drive	mm/ft in	1,650/ 5' 4"
	Weight	kg/lb	2 x 68,350/2 x 150,686



Undercarriage Central Girder

L	Length	mm/ft in	4,020/13'2"
H	Height	mm/ft in	2,557/ 8'4"
	Width	mm/ft in	4,440/14'6"
	Weight	kg/lb	34,200/75,398



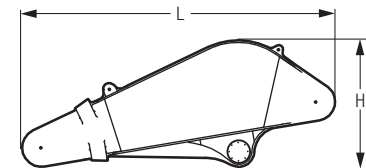
Shovel Boom

L	Length	mm/ft in	8,200/26'10"
H	Height	mm/ft in	3,000/ 9'10"
	Width	mm/ft in	2,750/ 9'
	Weight	kg/lb	38,000/83,776



Shovel Hoist Cylinder (two)

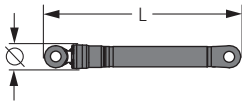
L	Length	mm/ft in	5,100/16'8"
Ø	Diameter	mm/ft in	550/ 1'9"
	Weight	kg/lb	2 x 5,000/2 x 11,023



Shovel Stick

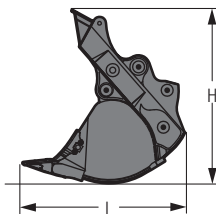
L	Length	mm/ft in	5,200/17'
H	Height	mm/ft in	2,100/ 6'10"
	Width	mm/ft in	2,300/ 7' 6"
	Weight	kg/lb	20,300/44,754

Dimensions and Weights



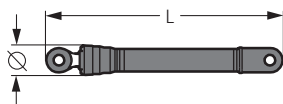
Shovel Crowd Cylinder (two)

L	Length	mm / ft in	3,600 / 11'9"
Ø	Diameter	mm / ft in	450 / 1'5"
	Weight	kg / lb	2 x 2,000 / 2 x 4,409



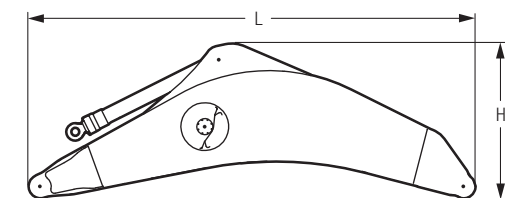
Face Shovel Bucket

	Application		HD
	Capacity ISO 7451	m ³ / yd ³	26.5 / 34.7
L	Length	mm / ft in	4,650 / 15'3"
H	Height	mm / ft in	4,800 / 15'8"
	Width	mm / ft in	4,300 / 14'1"
	Weight	kg / lb	42,600 / 93,917



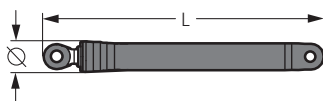
Bucket Tilt Cylinder (two)

L	Length	mm / ft in	4,300 / 14'1"
Ø	Diameter	mm / ft in	520 / 1'8"
	Weight	kg / lb	2 x 3,000 / 2 x 6,614



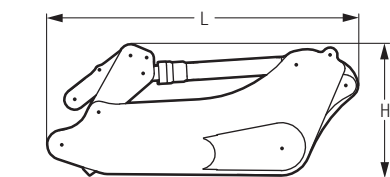
Gooseneck Boom with Stick Cylinders

L	Length	mm / ft in	10,600 / 34' 9"
H	Height	mm / ft in	4,100 / 13' 5"
	Width	mm / ft in	2,700 / 8'10"
	Weight	kg / lb	44,300 / 97,665



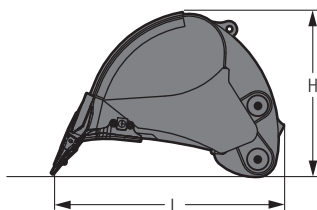
Backhoe Hoist Cylinders (two)

L	Length	mm / ft in	5,100 / 16'8"
Ø	Diameter	mm / ft in	550 / 1'9"
	Weight	kg / lb	2 x 4,900 / 2 x 10,800



Stick with Bucket Cylinders

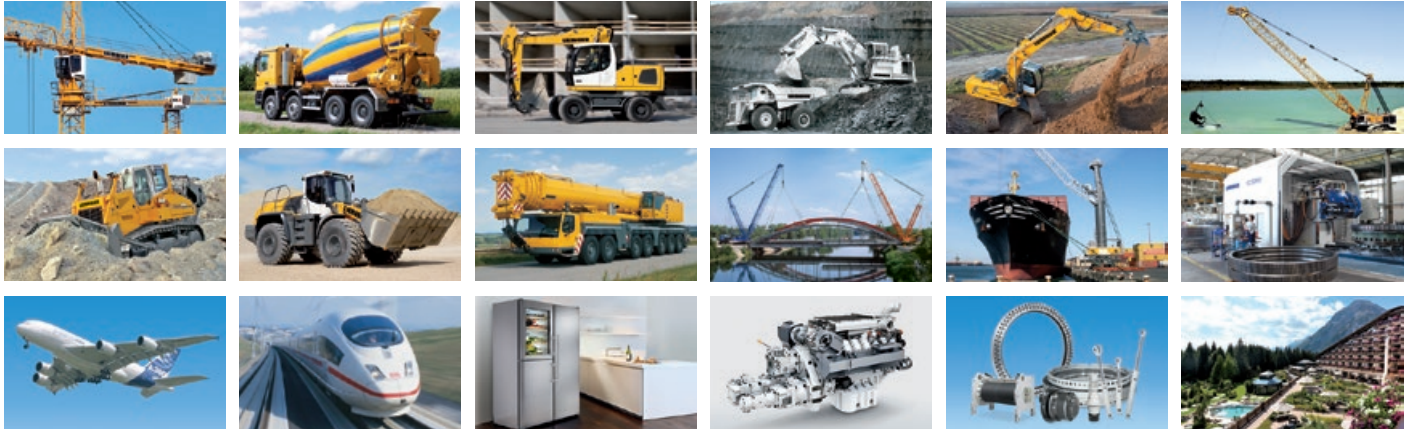
L	Length	mm / ft in	6,400 / 20'11"
H	Height	mm / ft in	2,200 / 7' 2"
	Width	mm / ft in	2,150 / 7'
	Weight	kg / lb	27,500 / 60,627



Backhoe Bucket

	Application		HD
	Capacity ISO 7451	m ³ / yd ³	26.5 / 34.7
L	Length	mm / ft in	4,300 / 14'1"
H	Height	mm / ft in	3,200 / 10'5"
	Width	mm / ft in	4,300 / 14'1"
	Weight	kg / lb	30,220 / 66,624

The Liebherr Group of Companies



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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. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

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

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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.

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