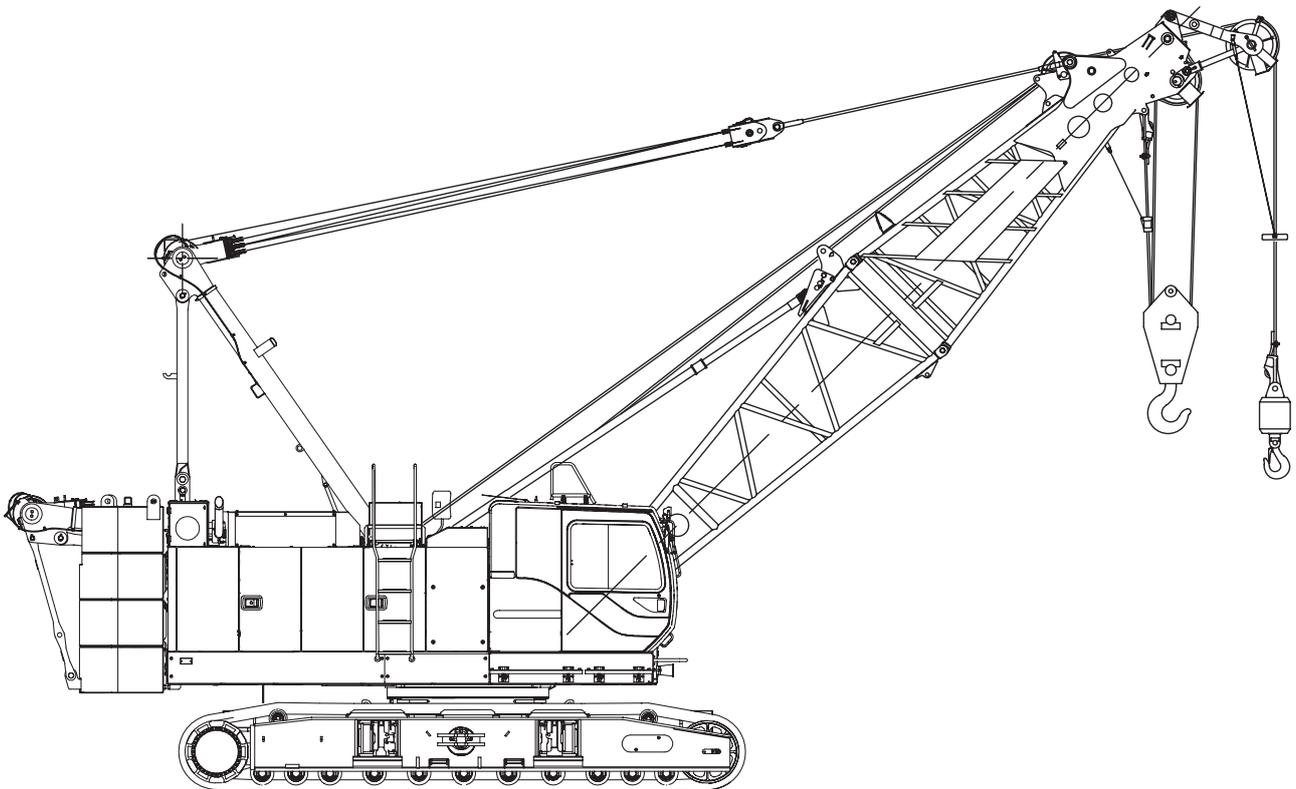


# Manیتowoc 8500E-1

## Product Guide



### Features

- 80 t capacity
- 54,86 m heavy-lift boom
- Max boom + jib combination:  
42,67 m + 18,3 m
- 213 kW engine
- 160 m/min maximum line speed
- 78 kN rated line pull



# Contents

Specifications	4
Outline dimensions	7
Performance data	13
Load chart notes	14
Boom combinations	15
Heavy-lift boom range / charts	16
Fixed jib boom range / load charts	18
Clamshell	21
Manitowoc Crane Care	22

# Specifications

## Upperworks



### Engine

Hino J08E-UV, 6 cylinder, water-cooled diesel, direct fuel injection with turbocharger, 213 kW at 2100 high-idle RPM. Maximum torque 1017 N•m net at 1,600 rpm.

**Emission standard:** Interim Tier IV / Stage IIIB.

One diesel fuel tank, 400 liters capacity.

Two 12 volt 136 AH capacity batteries, 24 volt system and 90 amp alternator.

All wiring harnesses and connectors are numbered for easier servicing. Machine is equipped with individual fused branch circuits.



### Controls

Full-flow hydraulic control system for constant variable pressure to front and rear drums, boom hoist brakes and clutches. Controls respond instantly to the touch, delivering smooth function operation.

**Relief valve pressures:**

<b>Load hoist, boom hoist and propel system</b> .....	31.9 MPa
<b>Swing system</b> .....	27.5 MPa
<b>Control system</b> .....	5.4 MPa



### Hydraulic system

All three variable displacement piston-type pumps are driven by a heavy-duty pump drive. One of these pumps is used in the right propel circuit and boom hoist circuit, and can accommodate an optional third circuit. Another is used in the left propel circuit and hook hoist circuit. The third variable displacement pump is used in the swing circuit. In addition, two gear pumps are used in the control system and auxiliary equipment, and two gear pumps serve the brake cooling system.

**Maximum pressure rating** .....

31.9 MPa
----------

<b>Load hoist, boom hoist and propel</b> ..	2 Piston pumps
<b>Swing</b> .....	1 Piston pump
<b>Control system and auxiliary</b> .....	2 Gear pumps
<b>Brake cooling system</b> .....	2 Gear pumps

**Reservoir capacity** .....

440 liter
-----------

**Cooling:** Oil-to-air heat exchanger (plate-fin type).

**Filtration:** Full-flow and bypass type with replaceable paper element.



### Drums

Front and rear drums for load hoist powered by variable displacement piston-type motors, driven through planetary reducers. Powered hoisting/lowering and free-fall operation is standard. Drum turn indicators for front and rear drums are also standard.

**Brakes:** spring set, hydraulically-released, multiple-disk holding brake is mounted on the hoist motor and is operated through a counter-balance valve. An external ratchet is fitted for locking the drums.

**Drums:** (front and rear) 550 mm P.C.D. x 545 mm wide drums, grooved for 22.0 mm wire rope.

**Wire rope capacity:**

Front drum .....	220 m working length
Rear drum .....	130 m working length

**Line speed:** Single line on the first drum layer

**Hoisting:** .....

120m/min
----------

**Lowering:** .....

120m/min
----------

▶ **Optional third drum:** free-fall is optional; drum grooved for 22 mm wire rope.

Wire rope working length .....

145m
------



### Swing system

**Swing unit:** Powered by a hydraulic piston-type motor driving spur gears through planetary reducers, the swing system provides 360° rotation.

**Swing brake:** A spring-set, hydraulically released multiple-disc brake is mounted on swing motor.

**Swing lock:** 4-Position lock for transportation.

**Rotating bed turntable:** Single-row ball bearing with an integral internally cut swing gear.

**Swing speed:** 4.0 rpm



### Boom support system

Single drum powered by a hydraulic axial piston motor through a planetary reducer.

**Brake:** A spring-set, hydraulically released multiple-disc brake is mounted on the boom hoist motor. An external ratchet is fitted for locking the drum.

**Drum:** Single drum, grooved for 16 mm diameter wire rope. Boom hoist reeving is 12-part line.

**Wire Rope Capacity:**

Drum 150 m working length.

# Specifications

**Line speed:**  
**Hoisting** ..... 70m/min  
**Lowering** ..... 70m/min



## Gantry

This high folding type gantry is fitted with a sheave frame for boom hoist reeving. Hydraulic lift is standard. It provides full up, full down positions.



## Counterweight

Upper weight (5 pieces): 27,200 kg  
Carbody weight (2 pieces): 6,500 kg



## Operator's cab

Totally enclosed, full vision cab fitted with tinted safety glass and opening front window. A fully adjustable, highbacked seat with arm rests. Short handle control levers; electronic twist grip hand throttle. Joystick controls are optional. An air conditioner, a signal horn and windshield wiper are standard.

**Lights:**  
2 - Front flood lights  
1 - Cab inside light

**Safety device**  
New easy to read at a glance LMI and maintenance display.

## Lowerworks



## Carbody

The durable carbody features steel welded construction with extendible axles.



## Crawlers

Crawler assemblies can be hydraulically extended for wide-track operation. Crawler belt tension adjusted with hydraulic jack and maintained by shims between idler block and frame.

The independent hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor driving a propel sprocket through a planetary gearbox. The hydraulic motor and gearbox are built into the crawler side frame within the shoe width. The track rollers are sealed for maintenance-free operation.

**Crawler shoes**  
800 mm wide crawler.

**Travel speed**  
(High/Low) 1.73/1.2 km/h

## Attachments



## Boom

Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections. Two idler sheaves and four point sheaves are standard.

Basic boom length 9,14 m consists of the boom butt section 5,18 m and boom top section 3,96 m.

Optional boom inserts are available to provide extension capabilities. They also have welded lattice construction with tubular, high-tension steel chords and pin connections on each one of the 3,0 m, 6,1 m, 9,14 m inserts.

Maximum total length of boom 54,86 m.



## Fixed jib

The optional fixed jib employs welded lattice construction with tubular, high-tensile steel chords with pin connections between sections.

Basic jib length 6,1 m consists of jib butt section 3,05 m and jib top section 3,05.

Optional jib boom inserts of 6,1 m are available for extension capabilities up to 18,3 m.

Maximum total length of boom and jib 42,7 m + 18,3 m is 61 m.

## Tools and accessories

A set of tools and accessories are furnished.

## Optional Equipment

- Optional: blocks and hooks each with roller bearing sheaves grooved for 22 mm diameter wire rope, and roller bearing swivel with hook latch.
- 6,6 t ball hook, 160 kg, wedge socket for 22 mm wire rope.
- 19 t hook block, 400 kg with one 500 mm Nominal O.D. roller bearing sheave.
- 32 t hook block, 500 kg with two 500 mm Nominal O.D. roller bearing sheaves.

# Specifications

- ▶ 50 t hook block, 650 kg, four 500 mm Nominal O.D. roller bearing sheave.
- ▶ 80 t hook block, 800 kg, with five 500 mm Nominal O.D. roller bearing sheaves.
- ▶ Optional: Detachable upper boom point with one 561 mm Nominal O. D. roller bearing steel sheave grooved for 22 mm rope for liftcrane.

## Working weight

Approximately 75,100 kg including upperworks and lowerworks, full upper counterweights, full carbody counterweights, 9,14 m basic boom and 80 t hook block.

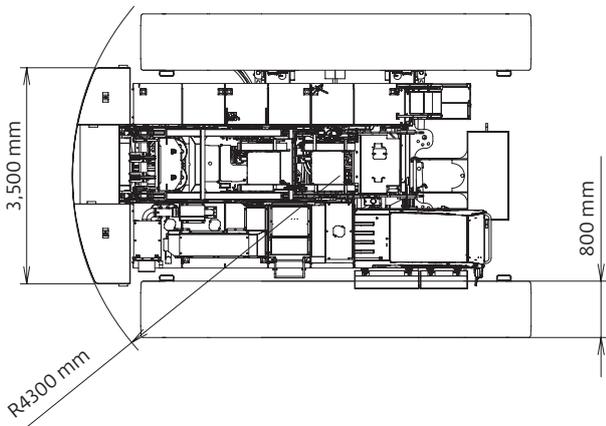
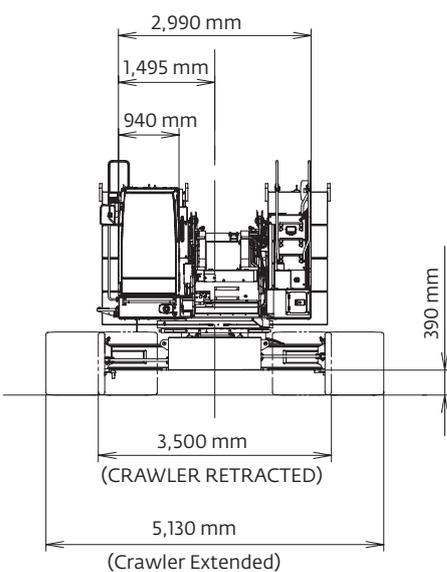
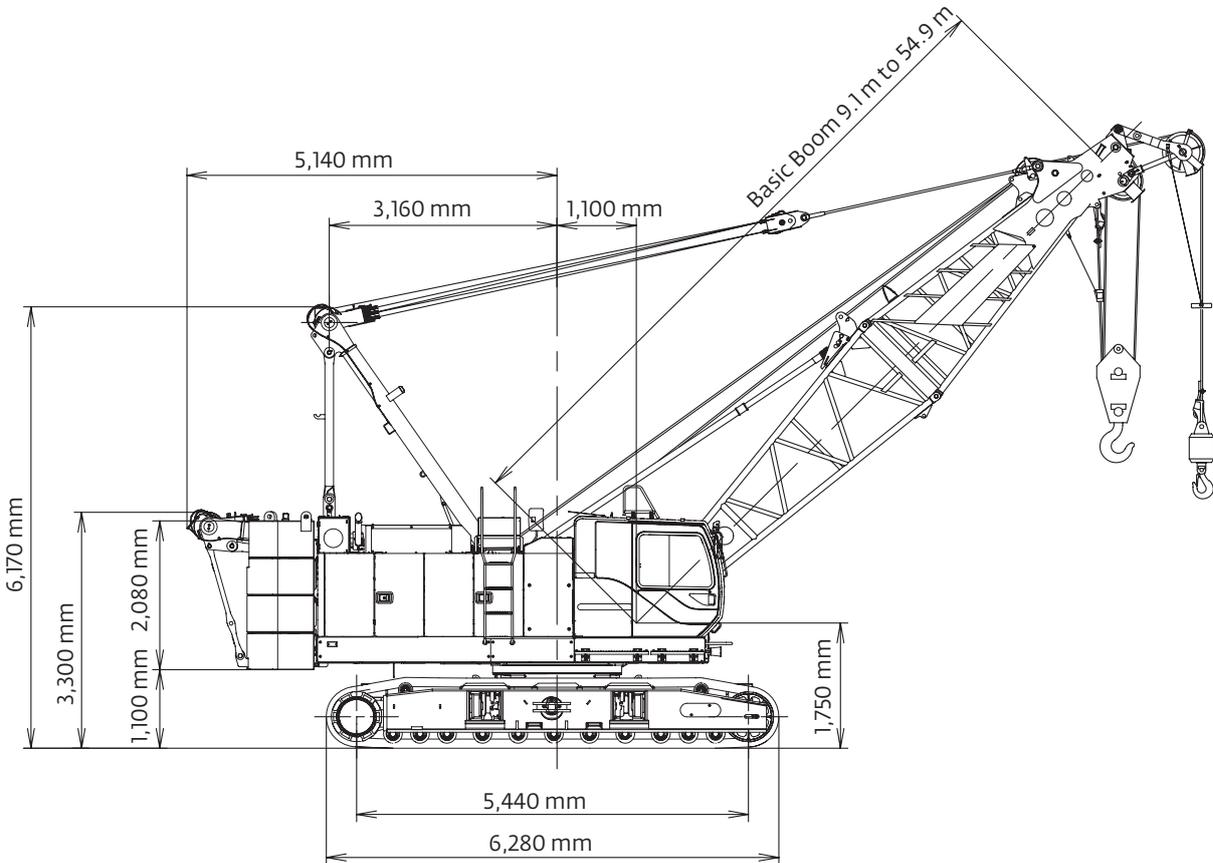
## Ground pressure

Approximately 85 kPa with basic boom.

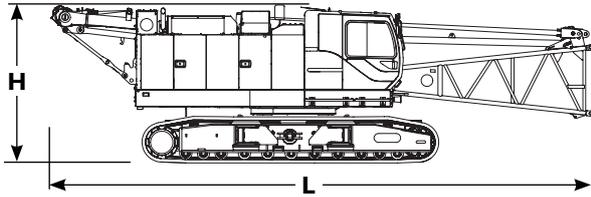
## Gradeability

With basic boom: 40%.

# Outline dimensions



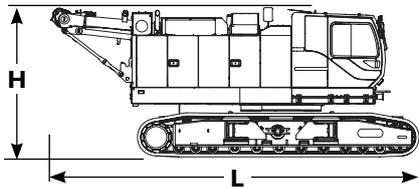
# Outline dimensions



## Upperworks x 1

Length	11,47 m
Width	3,50 m
Height	3,30 m
Weight	39 850 kg

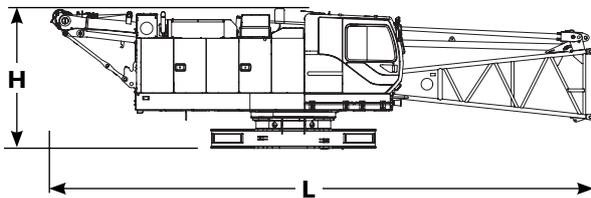
*Note: Weight includes base machine, crawler, gantry, maximum hoist and whip lines on drums, boom butt, full hydraulic fluid reservoir, and one third tank of fuel.*



## Upperworks x 1

Length	8,21 m
Width	3,61 m
Height	3,30 m
Weight	37 880 kg

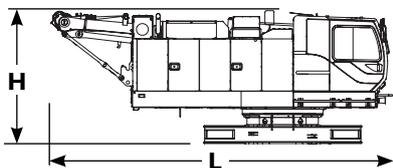
*Note: Weight includes base machine, crawler, gantry, maximum hoist and whip lines on drums, full hydraulic fluid reservoir, and one third tank of fuel.*



## Upperworks without crawlers x 1

Length	11,47 m
Width	2,99 m
Height	2,91 m
Weight	25 490 kg

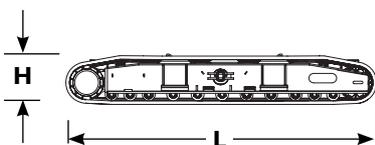
*Note: Weight includes base machine, gantry, maximum hoist and whip lines on drums, boom butt, full hydraulic fluid reservoir, and one third tank of fuel.*



## Upperworks without crawlers x 1

Length	7,70 m
Width	2,99 m
Height	2,87 m
Weight	23 520 kg

*Note: Weight includes base machine, gantry, maximum hoist and whip lines on drums, full hydraulic fluid reservoir, and one third tank of fuel.*

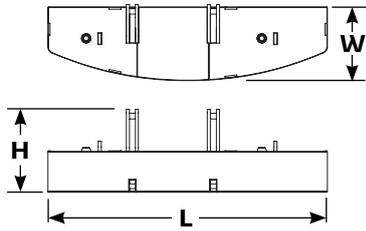


## Crawlers x 2

Length	6,28 m
Width	0,80 m
Height	0,98 m
Weight	7 180 kg

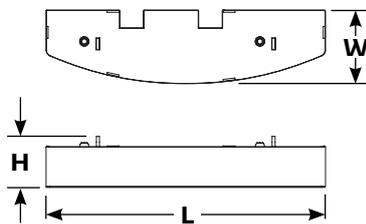
Option

# Outline dimensions



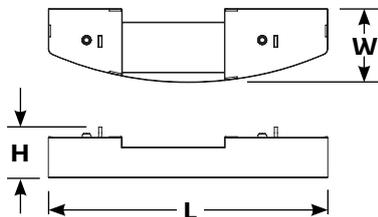
## Upper counterweight No. 1 x 1

Length	3,50 m
Width	0,93 m
Height	1,05 m
Weight	8 530 kg



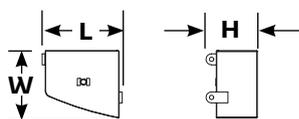
## Upper counterweight No. 2 x 1

Length	3,50 m
Width	0,93 m
Height	0,65 m
Weight	7 860 kg



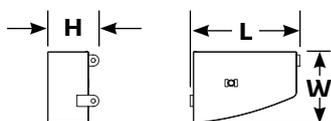
## Upper counterweight No. 3 x 1

Length	3,50 m
Width	0,93 m
Height	0,64 m
Weight	6 410 kg



## Upper counterweight No. 4 (L) x 2

Length	1,00 m
Width	0,85 m
Height	0,64 m
Weight	1 660 kg

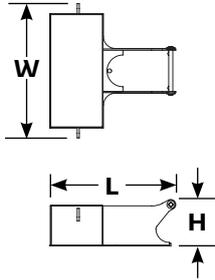


## Upper counterweight No. 4 (R) x 2

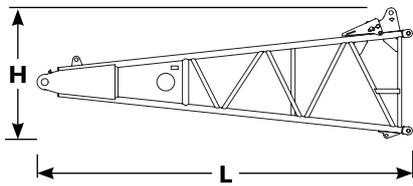
Length	1,37 m
Width	0,91 m
Height	0,64 m
Weight	2 740 kg

Option

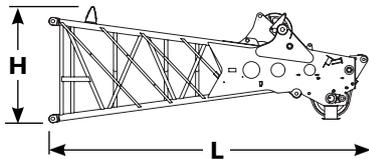
# Outline dimensions



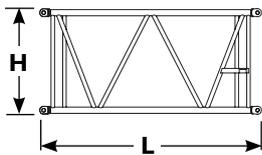
Carbody counterweight	x 2
Length	1,58 m
Width	1,69 m
Height	0,59 m
Weight	3 250 kg



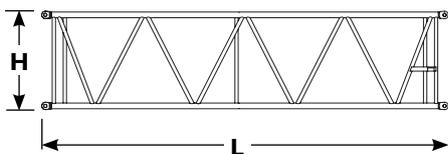
Boom butt	x 1
Length	5,35 m
Width	1,49 m
Height	1,87 m
Weight	1 130 kg



Boom top	x 1
Length	4,55 m
Width	1,51 m
Height	1,51 m
Weight	1 110 kg



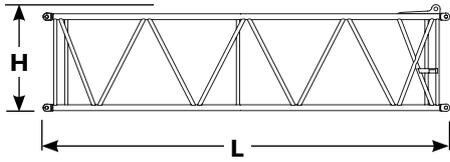
Boom insert 3,0 m	x 1,2
Length	3,16 m
Width	1,49 m
Height	1,51 m
Weight	311 kg



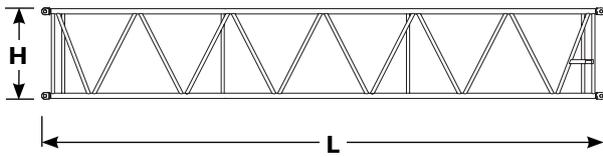
Boom insert 6,1 m	x 1,2
Length	6,21 m
Width	1,49 m
Height	1,51 m
Weight	522 kg

Option

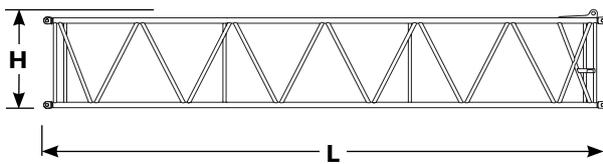
# Outline dimensions



	<b>Boom insert with lug 6,1 m</b>	<b>x 1</b>
	Length	6,21 m
	Width	1,49 m
	Height	1,64 m
	Weight	545 kg



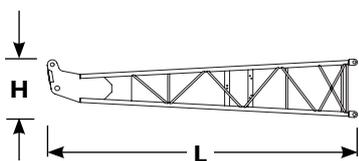
	<b>Boom insert 9,1 m</b>	<b>x 1,2,3</b>
	Length	9,26 m
	Width	1,49 m
	Height	1,51 m
	Weight	742 kg



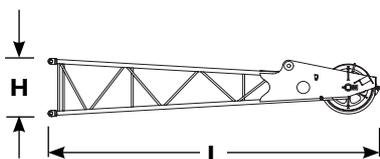
	<b>Boom insert with lug 9,1 m</b>	<b>x 1</b>
	Length	9,26 m
	Width	1,49 m
	Height	1,64 m
	Weight	765 kg



	<b>Backstop</b>	<b>x 1,2</b>
	Length	4,65 m
	Weight	245 kg



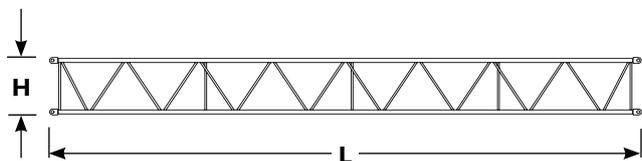
	<b>Fixed jib butt</b>	<b>x 1</b>
	Length	3,18 m
	Width	0,67 m
	Height	0,62 m
	Weight	125 kg



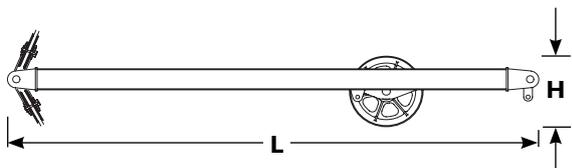
	<b>Fixed jib top</b>	<b>x 1</b>
	Length	3,40 m
	Width	0,67 m
	Height	0,62 m
	Weight	145 kg

 Option

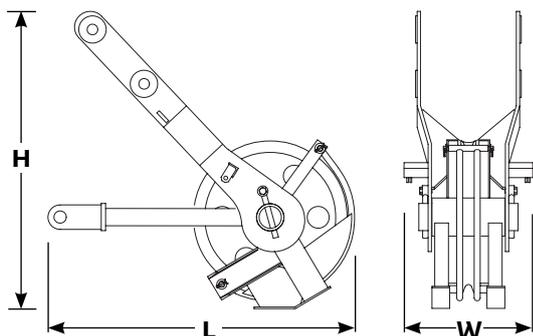
# Outline dimensions



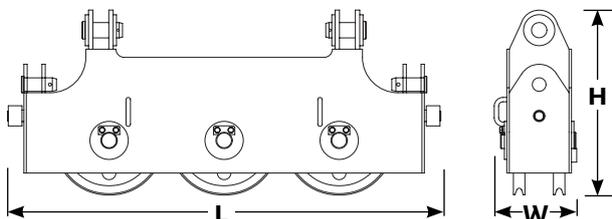
Fixed jib insert 6,1		x 1
Length	6,16 m	
Width	0,67 m	
Height	0,62 m	
Weight	140 kg	



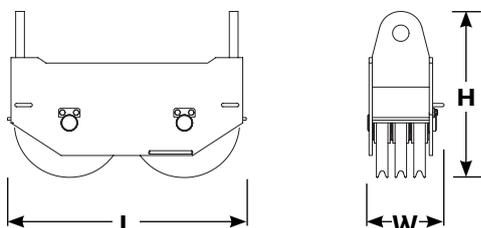
Fixed jib strut		x 1
Length	3,62 m	
Width	0,84 m	
Height	0,50 m	
Weight	190 kg	



Auxiliary sheave (Upper boom point)		x 1
Length	1,12m	
Width	0,47 m	
Height	1,09 m	
Weight	150 kg	



Upper spreader		x 1
Length	1,58 m	
Width	0,30 m	
Height	0,68 m	
Weight	280 kg	



Lower spreader		x 1
Length	0,87 m	
Width	0,28 m	
Height	0,61 m	
Weight	170 kg	

Option

# Performance data

Line pull		
	Rated line pull kN	*Maximum line pull kg
Front drum	78	15,600
Rear drum	78	15,600
Optional 3rd drum	78	15,600

\* Maximum line pull is not based on wire rope strength.

Wire rope specifications				
Use	Specs	Diameter mm	Working length m	Breaking strength kN
Front drum	U4 x SeS (39)	22,0	220	363
Rear drum	U4 x SeS (39)	22,0	130	363
Boom hoist drum	IWRCC/O 6 X Fi (31)	16,0	150	210
Optional 3rd drum	IWRCC/O 6 X Fi (29)	22,0	145	363

# Load chart notes

1. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
2. Capacities based on factors other than machine stability such as structural competence are shown by asterisk \* in the charts.
3. The machine must be reeved and set-up as stated in the operation manual and all the instruction manuals. If these manuals are missing, obtain replacements. Boom backstops are required for all boom lengths. Gantry must be in the fully raised position for all operations. Crawlers must be fully extended and be locked in position. The crane must be leveled to within 1% on a firm supporting surface.
4. Do not attempt to lift where no radius or load is listed as crane may tip or collapse.
5. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
6. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
7. The total load that can be lifted by the jib is limited by rated jib loads.
8. Boom lengths for jib mounting are 30,48 m to 45,72 m.
9. The total load that can be lifted by the upper boom point is: the rated load for the boom (without upper boom point installed) minus 200 kg; however, the upper boom point rated load should not exceed 6 600 kg.
10. An upper boom point cannot be used on a 54,86 m boom length.
11. The boom should be erected over the front of the crawlers, not laterally. When erecting and lowering the boom with a length of 54,86 m with jib, blocking must be placed at the end of the crawlers. See operator's manual for details.

12. Least stable position is over the side.

13. Maximum hoist load for number of reeving parts of line for hoist rope.

#### Maximum load for main boom

No. of parts of line	1	2	3	4	5
Maximum loads kN	78	157	235	314	392

No. of parts of line	6	7	8	9	10
Maximum loads kN	471	549	628	706	785

#### Maximum load for fixed jib

No. of parts of line	1
Maximum loads kg	6 600

#### Maximum load for upper boom point

No. of parts of line	1
Maximum loads kg	6 600

14. Lifting capacities listed apply only to the machine as originally manufactured for and supplied by Manitowoc Cranes, Inc. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.

15. Designed and rated to comply with EN13000.

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

# Boom combinations

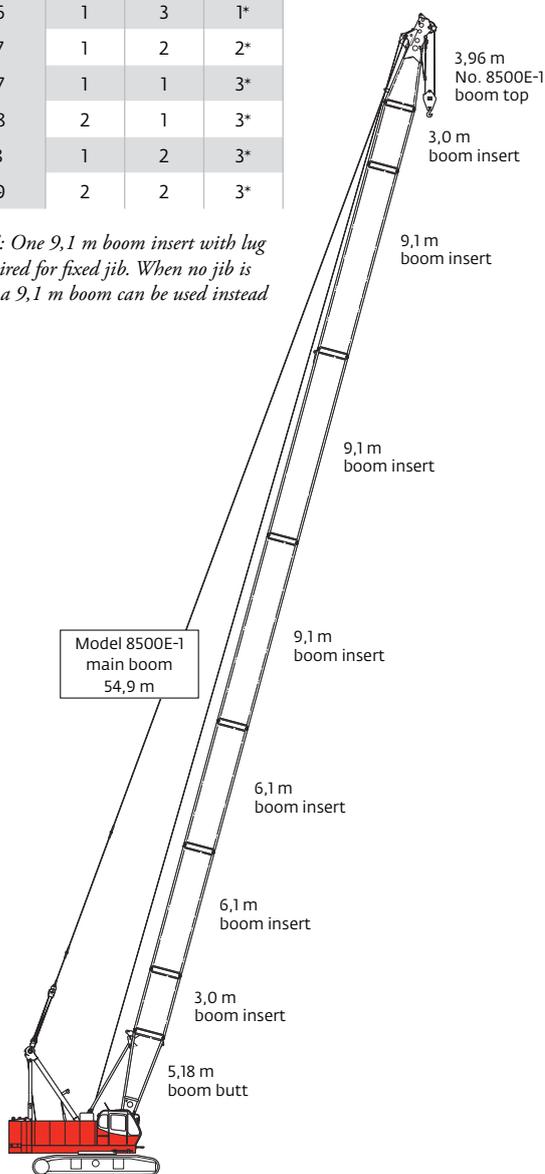
## No. 8500E-1 heavy-lift boom combinations

Boom length m	Boom inserts		
	3,1m	6,1m	9,1m
9,1	–	–	–
12,2	1	–	–
15,2	2	–	–
18,3	1	1	–
21,3	2	1	–
24,4	1	2	–
27,4	1	1	1
30,5	2	1	1*
33,5	1	2	1*
36,6	1	1	2*
39,6	1	3	1*
42,7	1	2	2*
45,7	1	1	3*
48,8	2	1	3*
51,8	1	2	3*
54,9	2	2	3*

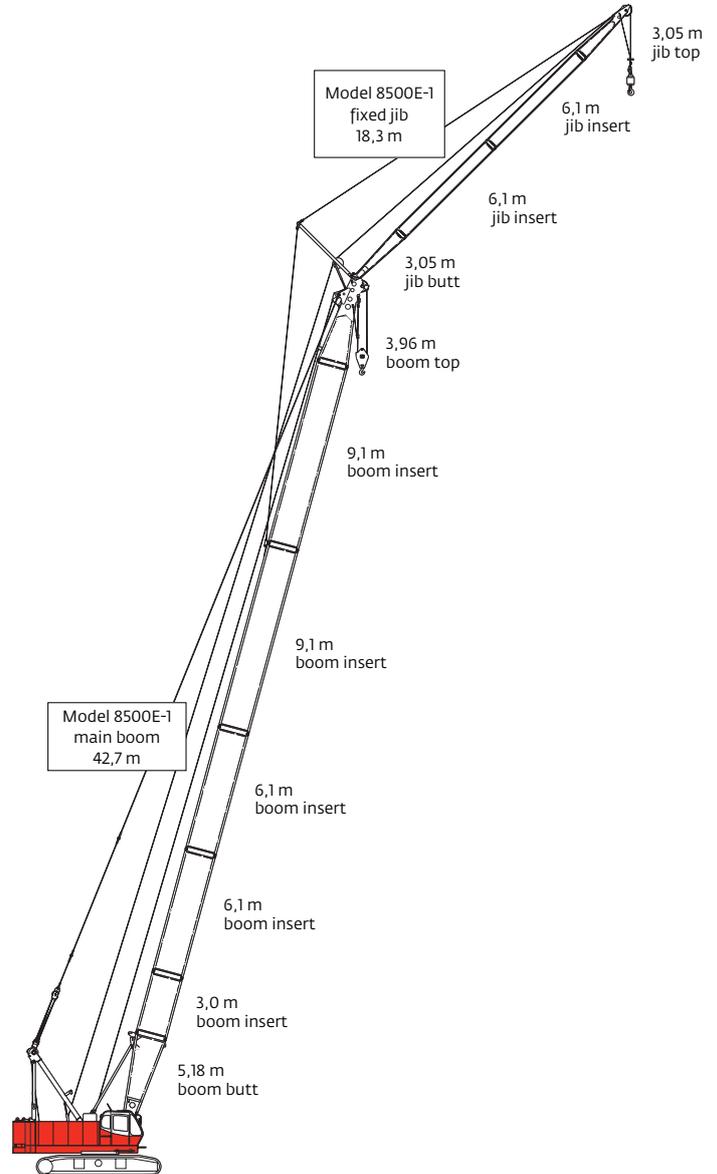
\* NOTE: One 9,1 m boom insert with lug A is required for fixed jib. When no jib is installed a 9,1 m boom can be used instead of 9,1 A.

## No. 8500E-1 fixed jib combinations

Fixed jib length m	Fixed jib inserts
	6,1m
6,1	–
12,2	1
18,3	2



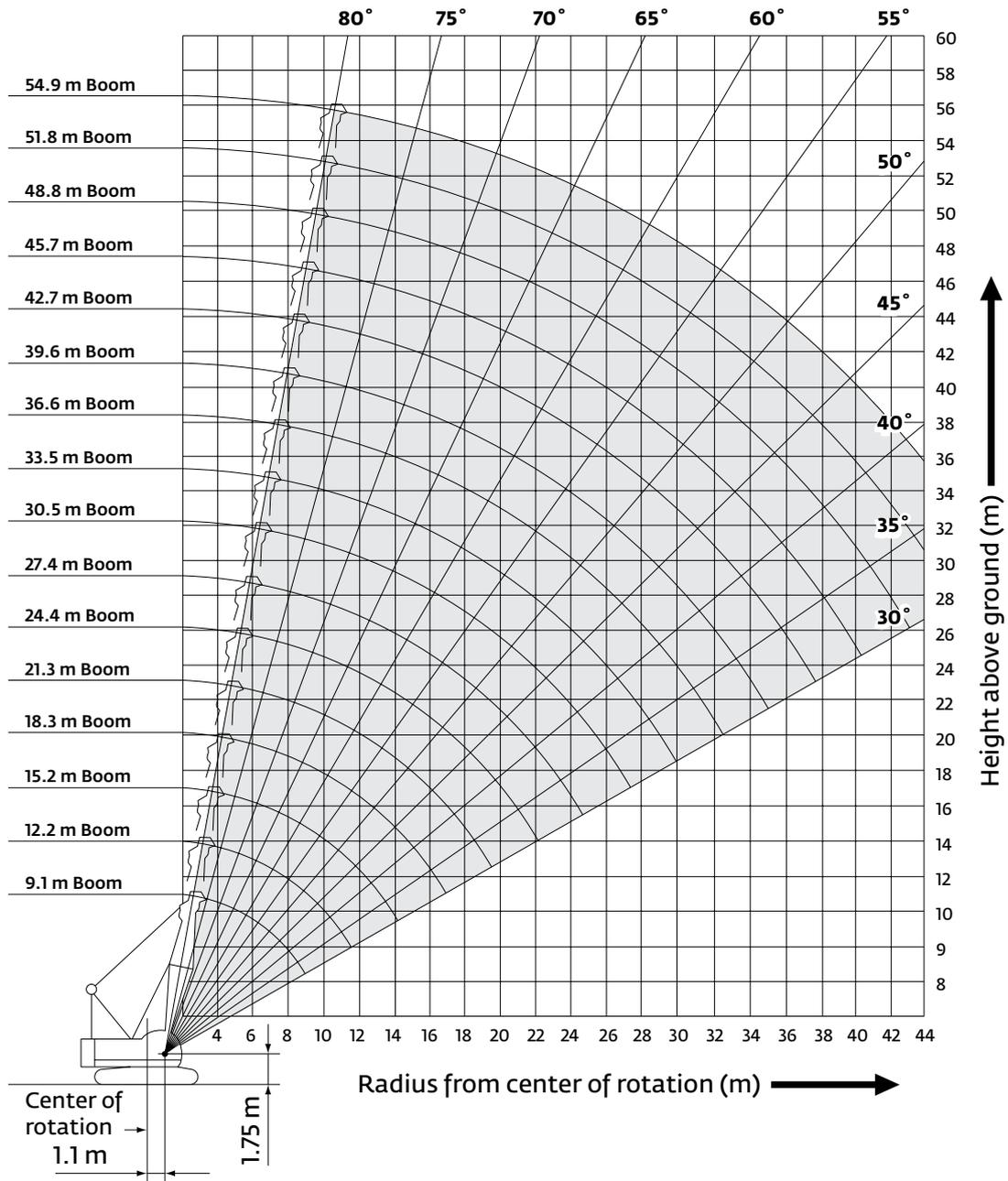
**Model 8500E-1  
Main boom 54,9 m**



**Model 8500E-1  
Fixed jib on main boom  
61,0 m**

# Heavy-lift boom range diagram

No. 8500E-1 main boom



# Heavy-lift boom load charts

## Model 8500E-1 liftcrane boom capacities - 8500E-1 main boom

27 200 kg crane counterweight  
6 500 kg carbody counterweight crawler extended

360° Rating

kg x 1 000

Boom m	9,1	12,2	15,2	18,3	21,3	24,4	27,4	30,5	33,5	36,6	39,6	42,7	45,7	48,8	51,8	54,9
Radius																
3,0	80,0*															
4,0	69,0*	72,6*														
5,0	57,9*	57,7*	57,5*	55,1												
6,0	47,5*	47,3*	46,7	44,6	42,6	40,8										
7,0	39,8	39,6	38,9	37,3	35,8	34,5	33,3	32,0								
8,0	32,9	32,7	32,5	32,0	30,9	29,8	28,8	27,8	26,9	26,0						
9,0	26,0*	27,8	27,6	27,5	27,0	26,2	25,4	24,5	23,8	23,1	22,4	21,7				
10,0		24,1	23,9	23,8	23,7	23,3	22,6	21,9	21,3	20,6	20,0	19,4	19,0	18,4		
12,0			18,8	18,7	18,6	8,5	18,4	17,9	17,4	16,9	16,5	16,0	15,6	15,1	14,8	14,4
14,0			15,4	15,3	15,1	15,0	14,9	14,8	14,7	14,2	13,9	13,5	13,2	12,8	12,5	12,1
16,0				12,9	12,7	12,6	12,5	12,3	12,2	12,1	11,9	11,5	11,3	10,9	10,7	10,4
18,0					10,9	10,8	10,7	10,5	10,4	10,3	10,2	10,0	9,8	9,4	9,3	9,0
20,0						9,3	9,2	9,1	9,0	8,8	8,7	8,6	8,5	8,3	8,1	7,8
22,0							8,2	8,1	7,9	7,8	7,7	7,6	7,5	7,4	7,2	6,9
24,0								7,2	7,0	6,9	6,8	6,6	6,5	6,4	6,3	6,1
26,0									6,2	6,1	6,0	5,9	5,7	5,6	5,4	5,3
28,0										5,5	5,4	5,2	5,1	5,0	4,9	4,7
30,0											4,9	4,8	4,7	4,5	4,4	4,3
32,0												4,3	4,2	4,0	3,9	3,8
34,0													3,8	3,6	3,5	3,4
36,0														3,3	3,2	3,0
38,0															2,9	2,8
40,0																2,7
42,0																2,6
44,0																2,4
46,0																2,1
48,0																2,0
																1,8
																1,6
																1,5
																1,3

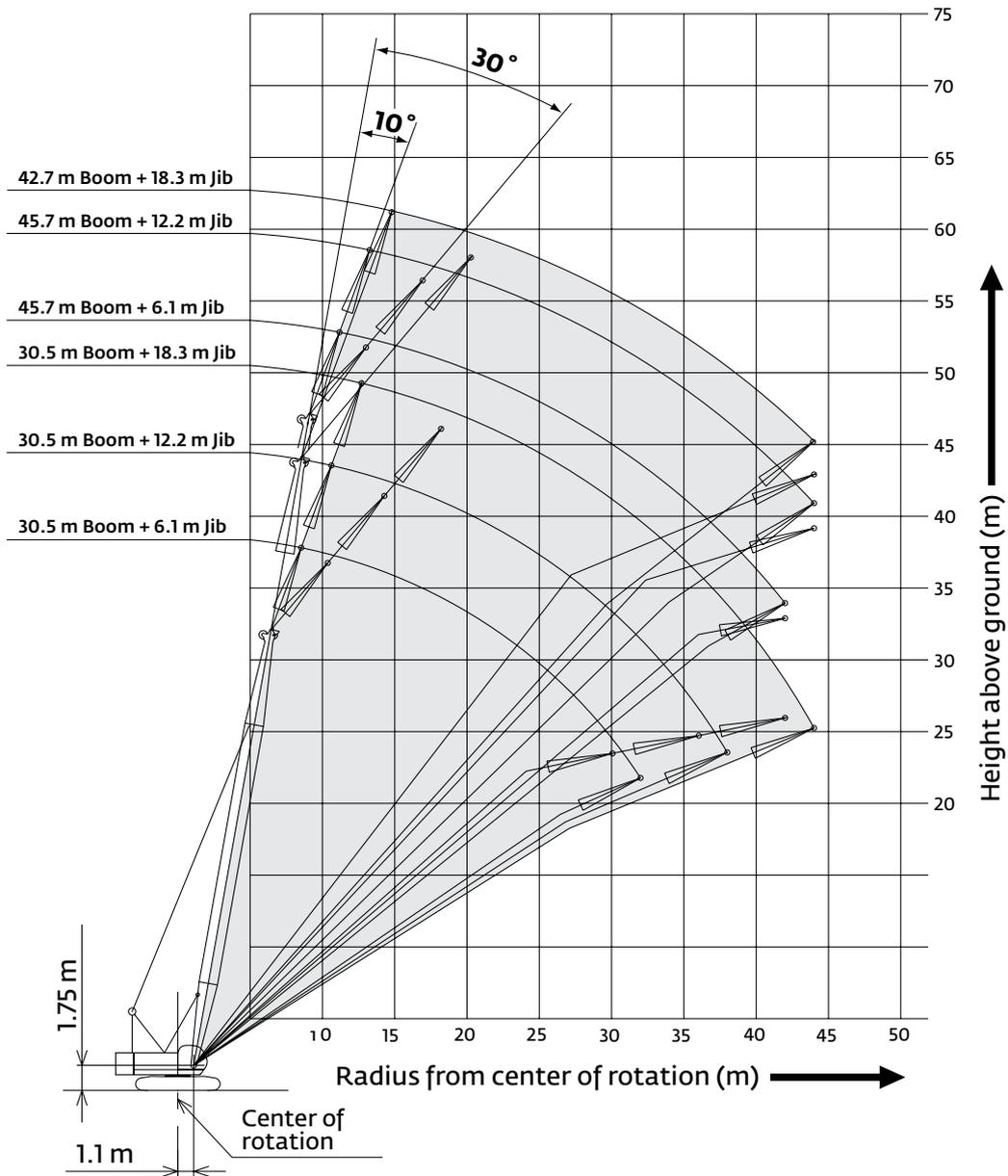
Meets EN13000 Requirements.

Notice: This capacity chart is for reference only and must not be used for lifting purposes.

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Fixed jib range diagram

No. 8500E-1 fixed jib on main boom



# Fixed jib load charts

## Model 8500E-1 liftcrane jib capacities

### No. 8500E-1 fixed jib on main boom

27 200 kg crane counterweight; 6 500 kg carbody counterweight crawler extended

360° Rating

10° offset

kg x 1 000

30° offset

		30,5	33,5	36,6	39,6	42,7	45,7
jib 6,1 m	Boom m						
	Radius						
	9,0	6,6*	6,6*				
	12,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	16,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	20,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,5
	24,0	5,4	5,2	5,1	5,0	4,9	4,8
	28,0	4,2	4,1	4,0	3,9	3,8	3,6
	32,0	3,4	3,2	3,1	3,0	2,9	2,7
	36,0		2,6	2,5	2,3	2,2	2,0
	40,0				1,7	1,6	1,4
	44,0					1,1	

		30,5	33,5	36,6	39,6	42,7	45,7
jib 6,1 m	Boom m						
	Radius						
	12,0	6,6*	6,6*	6,6*	6,6*		
	14,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	18,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	22,0	6,2	6,1	6,1	5,9	5,9	5,8
	26,0	4,8	4,7	4,6	4,5	4,4	4,3
	30,0	3,8	3,7	3,6	3,5	3,4	3,3
	34,0			2,9	2,7	2,6	2,4
	38,0				2,0	1,9	1,7
	40,0					1,6	1,4
	42,0						1,2

		30,5	33,5	36,6	39,6	42,7	45,7
jib 12,2 m	Boom m						
	Radius						
	12,0	6,6*	6,6*	6,6*			
	14,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	16,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	20,0	6,6*	6,6*	6,6*	6,6*	6,6*	6,6*
	24,0	5,6	5,5	5,4	5,3	5,2	5,1
	28,0	4,4	4,3	4,2	4,1	4,0	3,9
	32,0	3,6	3,4	3,3	3,2	3,1	3,0
	36,0	2,9	2,8	2,7	2,5	2,4	2,2
	40,0		2,3	2,1	1,9	1,8	1,6
	44,0			1,6	1,4	1,3	1,1

		30,5	33,5	36,6	39,6	42,7	45,7
jib 12,2 m	Boom m						
	Radius						
	16,0	5,0*	5,0*	5,0*	5,0*		
	18,0	5,0*	5,0*	5,0*	5,0*	5,0*	5,0*
	20,0	5,0*	5,0*	5,0*	5,0*	5,0*	5,0*
	22,0	5,0*	5,0*	5,0*	5,0*	5,0*	5,0*
	26,0	4,9	5,0*	5,0*	4,9	4,8	4,7
	30,0	4,1	4,0	3,9	3,8	3,8	3,7
	34,0	3,3	3,2	3,1	3,0	3,0	2,9
	38,0		2,6	2,5	2,4	2,3	2,1
	40,0			2,2	2,1	2,0	1,8
	44,0				1,5	1,4	1,3

Meets EN13000 Requirements.

Notice: This capacity chart is for reference only and must not be used for lifting purposes.

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Fixed jib load charts

## Model 8500E-1 liftcrane jib capacities

### No. 8500E-1 fixed jib on main boom

27 200 kg crane counterweight; 6 500 kg carbody counterweight crawler extended

360° Rating

kg x 1 000

#### 10° offset

#### 30° offset

		Boom m				
		30,5	33,5	36,6	39,6	42,7
Jib 18,3 m	Radius					
	12,0	4,5*				
	14,0	4,5*	4,5*	4,5*	4,5*	4,5*
	16,0	4,5*	4,5*	4,5*	4,5*	4,5*
	20,0	4,5*	4,5*	4,5*	4,5*	4,5*
	24,0	4,5*	4,5*	4,5*	4,5*	4,5*
	28,0	4,5*	4,4*	4,3	4,2	4,1
	32,0	3,7	3,5	3,5	3,3	3,2
	36,0	3,0	2,9	2,8	2,7	2,6
	40,0	2,5	2,4	2,3	2,1	2,0
	44,0	2,1	1,9	1,8	1,6	1,5

		Boom m				
		30,5	33,5	36,6	39,6	42,7
Jib 18,3 m	Radius					
	18,0	3,2*	3,2*			
	20,0	3,2*	3,2*	3,2*	3,2*	3,2*
	22,0	3,2*	3,2*	3,2*	3,2*	3,2*
	26,0	3,2*	3,2*	3,2*	3,2*	3,2*
	30,0	3,1	3,2*	3,2*	3,2*	3,2*
	34,0	2,8	2,9	3,0	3,1	3,2*
	38,0	2,6	2,7	2,7	2,6	2,5
	40,0	2,5	2,5	2,5	2,3	2,3
	42,0	2,4	2,3	2,2	2,1	2,0
	44,0		2,1	2,0	1,8	1,7

Meets EN13000 Requirements.

Notice: This capacity chart is for reference only and must not be used for lifting purposes.

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Clamshell

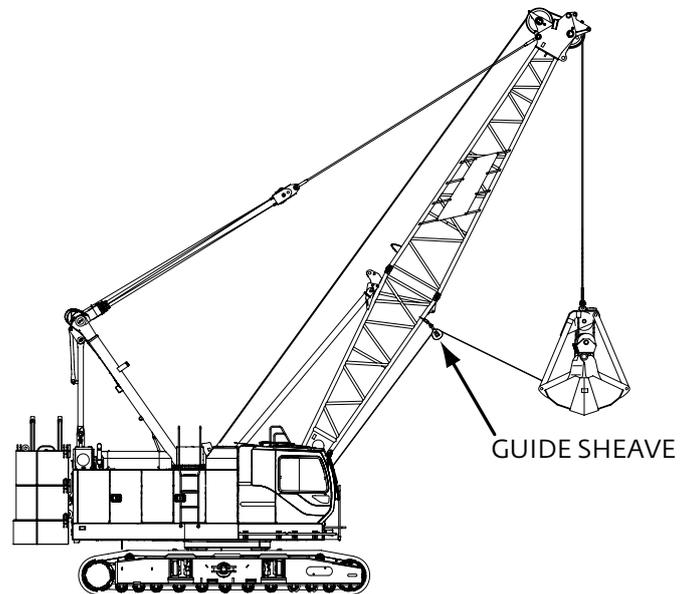
## Main hoist loads

No. of parts of line	1
Maximum loads	69 kN
Maximum loads	7,0 t

1. Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.
2. Deduct weight of bucket, slings and all other load handling accessories from main boom ratings shown.
3. Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
4. Rated loads do not exceed 66% of minimum tipping loads.
5. Ratings are for operation on a firm and level surface, up to 1% gradient.
6. At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
7. Boom inserts and guy lines must be arranged as shown in the "operator's manual".
8. Boom hoist reeving is 12 part line.
9. Gantry must be in raised position for all conditions.
10. Boom backstops are required for all boom lengths.
11. The boom should be erected over the front of the crawlers, not laterally.
12. Crawler frames must be fully extended for all crane operations.

## Clamshell bucket lifting

1. The total load that can be lifted is the value for weight of bucket, slings, and all other load handling accessories deducted from main boom ratings shown.
2. The weight of bucket and materials must not exceed rated load.
3. Optimum bucket should be required according to material.  
 $\text{Bucket capacity (m}^3\text{)} \times \text{specified gravity of material (ton/m}^3\text{)} + \text{bucket weight (ton)} = \text{rated load.}$
4. Bucket weight must also be decreased according to operating cycle and bucket lowering height.
5. Rated loads are determined by stability and boom strength. During simultaneous operations of boom and swing, rapid acceleration or deceleration must be avoided.
6. Do not attempt to cast the bucket while swinging or diagonal draw-cutting.



## Clamshell Capacities

17,7 t counterweight  
(three upper counterweights, crawlers extended)

	kg x 1 000				
Boom m	9,1	12,2	15,2	18,3	21,3
Radius					
5,0	7,0				
5,5	7,0				
6,0	7,0	7,0			
7,0	7,0	7,0	7,0		
8,0	7,0	7,0	7,0	7,0	
9,0	7,0	7,0	7,0	7,0	7,0
10,0		7,0	7,0	7,0	7,0
12,0			7,0	7,0	7,0
14,0			7,0	7,0	7,0
16,0				7,0	7,0
18,0					7,0

# Manitowoc Crane Care

**Crane Care** is Manitowoc's comprehensive service and support program. It includes classroom and on-site training, prompt parts availability, expert field service, technical support and documentation.

That's commitment you won't find anywhere else.

That's Crane Care.

## Service training

Manitowoc specialists work with you in our training centers and in the field to make sure you know how to get maximum performance, reliability and life from your cranes.

Manitowoc Cranes Technical Training Centers provide valuable multi-level training, which is available for all models and attachments, in the following format:

- **Intro to Canbus and Canbus 1, 2, 3**
- **Intro to EPIC and EPIC 1, 2, 3**
- **Small Crawler 1**
- **Canbus 1 and 2 assembly, operation and maintenance**
- **EPIC 1 and 2 assembly, operation and maintenance**

Refer to [www.manitowoc.com](http://www.manitowoc.com) for course descriptions.

## Parts availability

Genuine Manitowoc replacement parts are accessible through your distributor 24 hours a day, 7 days a week, 365 days a year.

### Service interval kits

**200 hour kit**

**1,000 hour kit**

**2,000 hour kit**

**Hydraulic test kit**

**U.S. standard tools kit**

## Field service

Factory-trained service experts are always ready to help maintain your crane's peak performance.

For a worldwide listing of dealer locations, please consult our website at: [www.manitowoc.com](http://www.manitowoc.com)

## Technical support

Manitowoc's dealer network and factory personnel are available 24 hours a day, 7 days a week, 365 days a year to answer your technical questions and more, with the help of computerized programs that simplify crane selection, lift planning, and ground-bearing calculations.

For a worldwide listing of dealer locations, please consult our website at: [www.manitowoc.com](http://www.manitowoc.com)

## Technical documentation

Manitowoc has the industry's most extensive documentation; available in major languages and formats that include print, videotape, and DVD/CD.

Additional copies available through your Authorized Manitowoc Distributor.

- Crane operator's manual
- Crane parts manual
- Crane capacity manual
- Crane vendor manual
- Crane service manual
- Luffing jib operator's/parts manual
- Capacity chart manual - attachments

Available from your Authorized Manitowoc Cranes Distributor, these videos are available in NTSC, PAL, SECAM, and DVD formats.

- Your Capacity Chart Video
- Respect the Limits Video
- Crane Safety Video
- Boom Inspection/Repair Video

## Crane Care Package

Manitowoc has assembled all of the available literature, CD's and videos listed above plus several Manitowoc premiums into one complete Crane Care Package, which is supplied to the owner of each new crane.



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