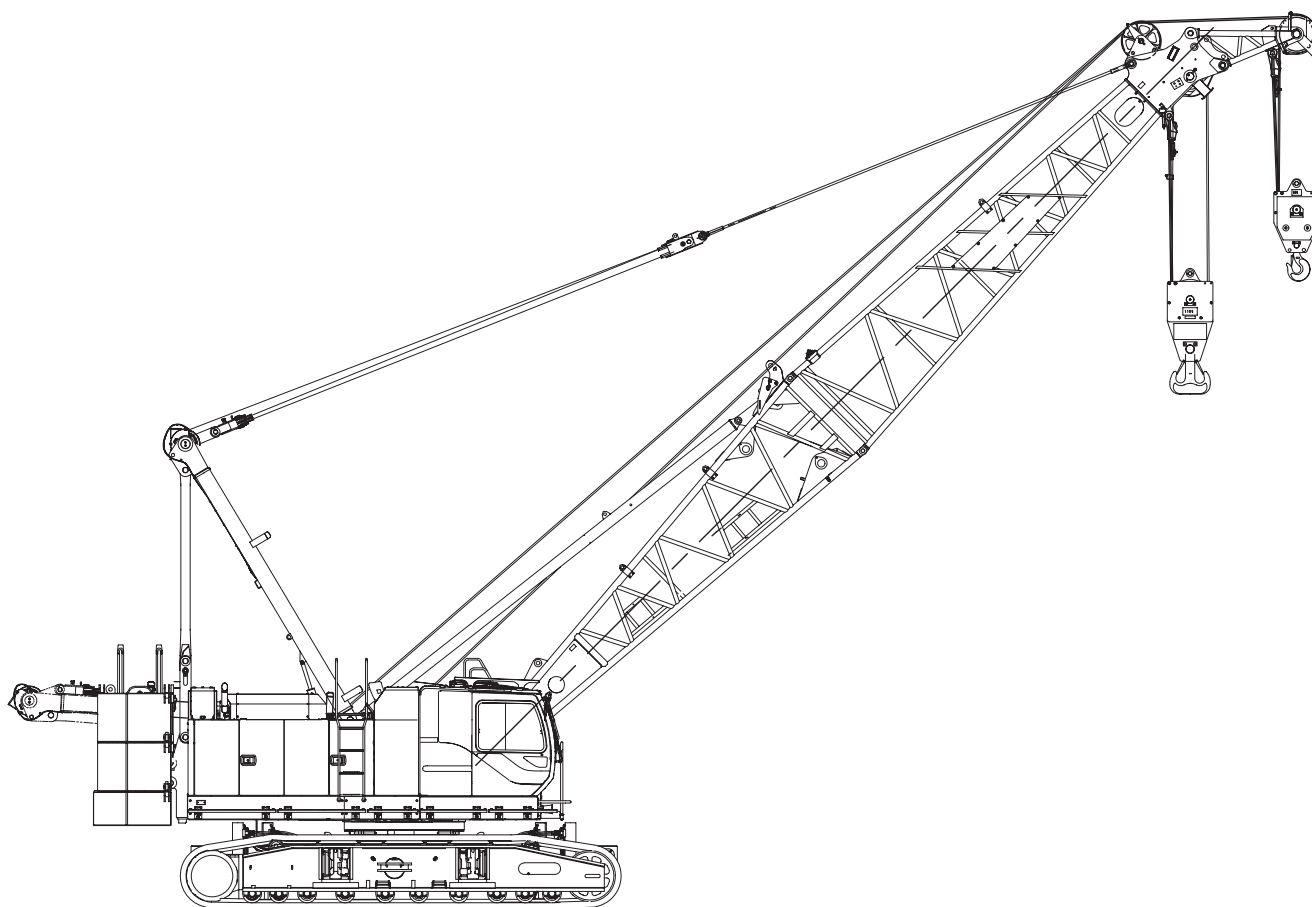


# Manitowoc 12000E-1

## Product Guide



### Features

- 110 t capacity
- 70,1 m heavy-lift boom
- Max boom + jib combination:  
61 m + 21.3 m
- 213 kW engine
- 163 m/min maximum line speed
- 110 kN rated line pull



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# 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 4/Stage IIIB.

**Fuel tank:** 400 liters

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:**

**Load hoist, boom hoist**

**and propel system.** . . . . . 31.9 MPa

**Swing system.** . . . . . 27.5 MPa

**Control system** . . . . . 7.0 MPa



### Hydraulic system

All four 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 hook hoist circuit, and can accommodate an optional third circuit. Another is used in the left propel circuit and hook hoist circuit. A third pump is used in the boom hoist circuit. The fourth 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

**Load hoist and propel** . . . . . 2 Piston pumps

**Boom hoist** . . . . . 1 Piston pump

**Swing** . . . . . 1 Piston pump

**Control system and auxiliary** . . . . . 2 Gear pumps

**Brake cooling system** . . . . . 2 Gear pumps

**Hydraulic tank** . . . . . 535 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 optional.

**Brake & Clutches (compatible):** Forced-circulation oil-cooled wet-type multi-disc brakes, each using positive and negative actuation. An external ratchet is fitted for locking the drums.

**Drums:** (front and rear) 614 mm P.C.D. x 617 mm wide drums, grooved for 26 mm wire rope.

**Wire rope capacity:**

Front drum 265 m working length

Rear drum 235 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 26 mm wire rope. Wire rope capacity working length is 190 m.



### 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 the 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:** 3.2 rpm

# Specifications



## 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 20 mm diameter wire rope. Boom Hoist reeving is 10-part line.

### Wire Rope Capacity:

Drum 155 m working length.

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

**Hoisting:** .....70m/min

**Lowering:** .....70m/min



## Gantry

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



## Counterweight

Upper weight (5 pieces): 34,600 kg

Carbody weight (2 pieces): 6,500 kg



## Operator's cab

Totally enclosed, full vision cab fitted with tinted safety glass. A fully adjustable, highbacked seat with arm rests permits operators to set their ideal working position. Short handle control levers; electronic twist grip hand throttle. An air conditioner, a signal horn and windshield wiper are standard features.

### 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.

### Safety device

New easy to read at a glance LMI and maintenance display. Function lock lever, anti-two-block, boom over hoist limit switch, boom angle indicator, signal horn, boom hoist drum lock, front and rear drum lock, swing lock, swing alarm (buzzer and lamps), external lamp for overload alarm, boom backstops and load moment indicator.

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

## 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.

### Crawler drive

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 brakes

Spring set, hydraulically released, multiple disc-type parking brakes are built into each propel drive.

### Steering mechanism

The hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving each track in opposite direction) and differential track speed.

### Crawler shoes

900 mm wide each crawler.

### Travel speed

(High/Low) 1.4/1.0 km/h

## Attachments



## Boom

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

# Specifications

Basic boom length 15,2 m consists of the boom butt section 7,62 m and boom top section 7,62 m.

Optional boom inserts are available to provide extension capabilities. They also have welded lattice construction with tubular, high-tensile steel chords and pin connections on each one of 3,0 m, 6,1 m, 12,2 m inserts.

Maximum total length of boom 70,1 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 9,14 m consists of jib butt section 4,57 m and jib top section 4,57 m.

Optional jib boom inserts of 3,0 m, 6,1 m are available for extension capabilities up to 21,3 m.

Maximum total length of boom and jib 61,0 m + 21,3 m is 82,3 m.

▶ Slewing restrictor.

▶ Hydraulic tagline.

## Working weight

Approximately 101 600 kg including upperworks and lowerworks, full upper counterweights, full carbody counterweight, 15,2 m basic boom and 110 t hook block.

## Ground pressure

Approximately 95.4 kPa with basic boom and no load.

## Gradeability

With basic boom: 40%.

## Tools and accessories

A set of tools and accessories are furnished.

## Optional equipment

▶ Optional: Blocks and Hooks each with roller bearing sheaves grooved for 26.0 mm diameter wire rope, and roller bearing swivel with hook latch.

▶ 13.5 t ball hook, 450 kg, wedge socket for 26 mm wire rope.

▶ 35 USt hook block, 700 kg with one 622 mm Nominal O.D. roller bearing sheave.

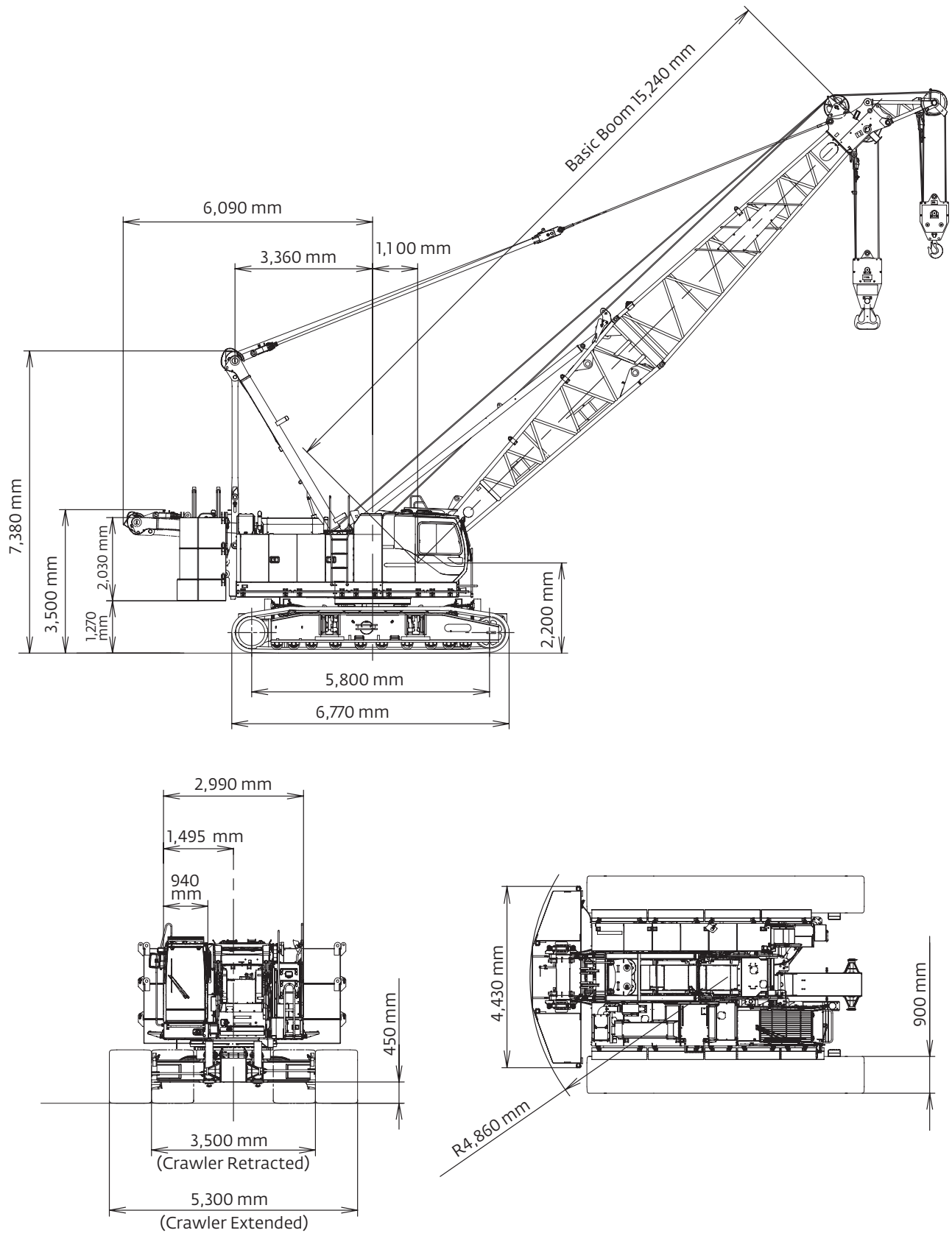
▶ 70 t hook block, 900 kg, with three 622 mm Nominal O.D. roller bearing sheaves.

▶ 110 t hook block, 1 700 kg with five 622 mm Nominal O.D. roller bearing sheaves.

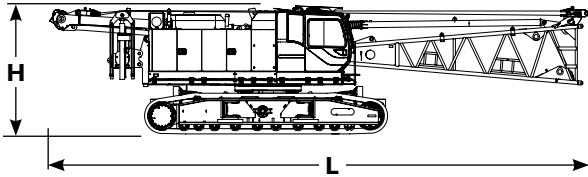
▶ Optional: Detachable upper boom point with one 575 mm Nominal outer diameter roller bearing steel sheave grooved for 26 mm rope for liftcrane.

▶ Machine inclination sensor.

# Outline dimensions



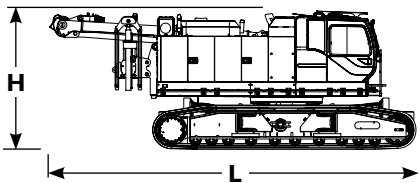
# Outline dimensions



## Upperworks x 1

Length	15,78 m
Width	3,50 m
Height	3,50 m
Weight	57 410 kg

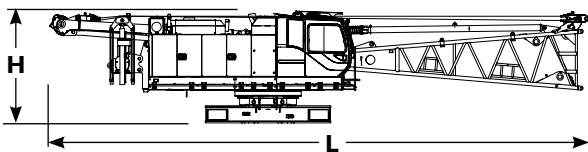
*Note: Weight includes base machine, crawler, gantry, maximum hoist and whip lines on drums, boom butt, full hydraulic fluid reservoir, and one third tank of fuel.*



## Upperworks x 1

Length	9,42 m
Width	3,50 m
Height	3,50 m
Weight	54 090 kg

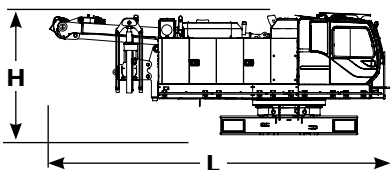
*Note: Weight includes base machine, crawler, gantry, maximum hoist and whip lines on drums, full hydraulic fluid reservoir, and one third tank of fuel.*



## Upperworks without crawlers x 1

Length	15,78 m
Width	2,99 m
Height	3,05 m
Weight	33 550 kg

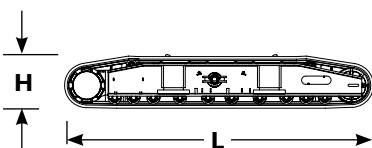
*Note: Weight includes base machine, gantry, maximum hoist and whip lines on drums, boom butt, full hydraulic fluid reservoir, and one third tank of fuel.*



## Upperworks without crawlers x 1

Length	8,65 m
Width	2,99 m
Height	3,05 m
Weight	30 230 kg

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



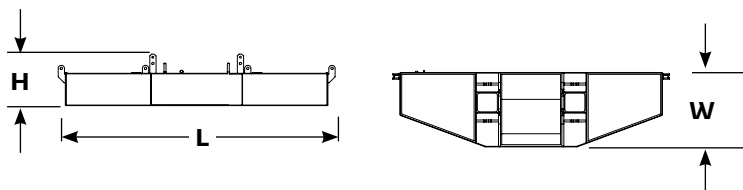
## Crawlers x 2

Length	6,77 m
Width	0,90 m
Height	1,13 m
Weight	11 930 kg

Option

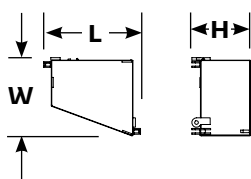


# Outline dimensions



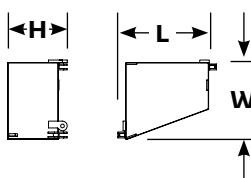
## Upper counterweight No. 1 x1

Length	4,43 m
Width	1,19 m
Height	0,83 m
Weight	11 600 kg



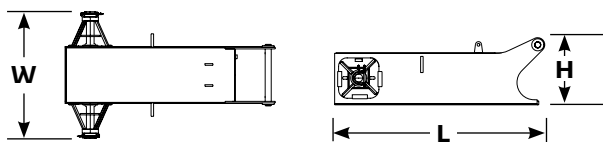
## Upper counterweight No. 2, 3 (L) x1

Length	1,45 m
Width	1,17 m
Height	0,88 m
Weight	5 750 kg



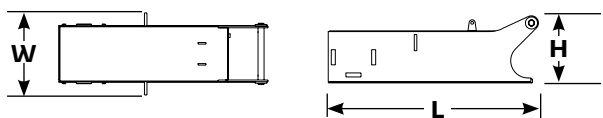
## Upper counterweight No. 2,3 (R) x1

Length	1,45 m
Width	1,17 m
Height	0,88 m
Weight	5 750 kg



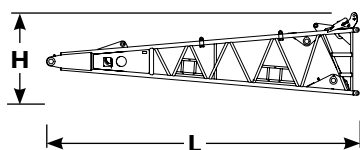
## Carbody counterweight with float x2

Length	2,08 m
Width	1,26 m
Height	0,66 m
Weight	3 320 kg




## Carbody counterweight without float x2

Length	2,08 m
Width	0,82 m
Height	0,66 m
Weight	3 250 kg

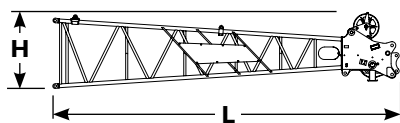


## Boom butt x1

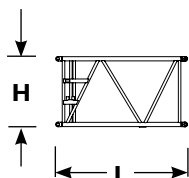
Length	7,79 m
Width	1,73 m
Height	2,06 m
Weight	2 235 kg

 Option

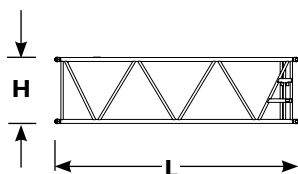
# Outline dimensions



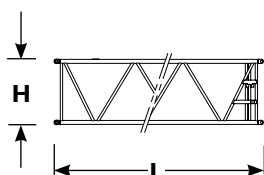
Boom top	x 1
Length	8,32 m
Width	1,68 m
Height	1,69 m
Weight	1 525 kg



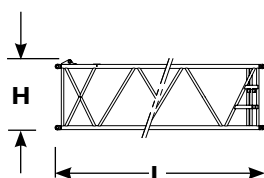
Boom insert 3,0 m	x 1,2
Length	3,16 m
Width	1,68 m
Height	1,69 m
Weight	380 kg



Boom insert 6,1 m	x 1,2
Length	6,21 m
Width	1,68 m
Height	1,69 m
Weight	655 kg

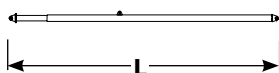


Boom insert 12,2 m	x 1,2,3
Length	12,31 m
Width	1,68 m
Height	1,69 m
Weight	1 195 kg




Boom insert with lug 12,2 m	x 1
Length	12,31 m
Width	1,68 m
Height	1,81 m
Weight	1 220 kg

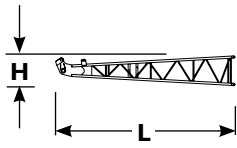
*Note: Use of one "A" type insert with lug required for any boom combinations that require a 12,2 m insert.*



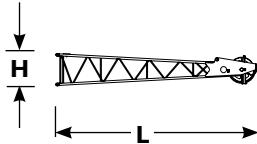
Backstop	x 1
Length	6,79 m
Weight	440 kg

 Option

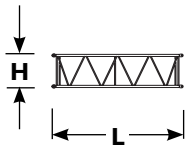
# Outline dimensions



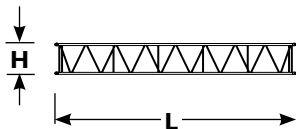
Fixed jib butt	x 1
Length	4,81 m
Width	0,80 m
Height	0,80 m
Weight	200 kg



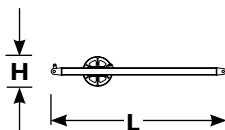
Fixed jib top	x 1
Length	5,00 m
Width	0,80 m
Height	0,80 m
Weight	280 kg



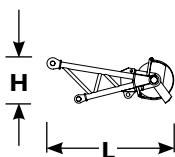
Fixed jib insert 3,0 m	x 1,2
Length	3,11 m
Width	0,80 m
Height	0,80 m
Weight	100 kg



Fixed jib insert 6,1	x 1,2
Length	6,16 m
Width	0,80 m
Height	0,80 m
Weight	180 kg



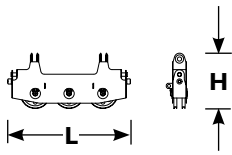
Fixed jib strut	x 1
Length	3,62 m
Width	0,84 m
Height	0,62 m
Weight	250 kg



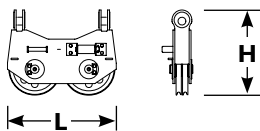
Auxiliary sheave	x 1
Length	2,01 m
Width	0,74 m
Height	0,72 m
Weight	300 kg

Option

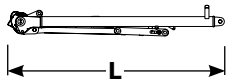
# Outline dimensions



Upper spreader	x 1
Length	1,78 m
Width	0,31 m
Height	0,80 m
Weight	300 kg



Lower spreader	x 1
Length	0,91 m
Width	0,26 m
Height	0,71 m
Weight	200 kg



Gantry	x 1
Length	5,36 m
Width	1,25 m
Height	0,76 m
Weight	1 320 kg

# Performance data

Line pull		
	Rated line pull kg	*Maximum line pull kg
Front drum	11 000	21 200
Rear drum	11 000	21 200
Optional 3rd drum	11 000	21 200

*\* 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	U3 x SeS (48)	26,0	265	601
Rear drum	U3 x SeS (48)	26,0	235	601
Boom hoist drum	IWRC 6 X WS (31) C/O	20,0	155	328
Third drum (optional)	IWRC 6 X Fi (29) C/O	26,0	190	534

# Load chart notes

- 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).
- Capacities based on factors other than machine stability such as structural competence are shown by asterisk \* in the charts.
- 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.
- Do not attempt to lift where no radius or load is listed as crane may tip or collapse.
- Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
- 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.
- When lifting over boom point with jib or upper boom point installed, rated loads for the boom must be deducted as shown below.

Jib length m	Upper boom point	9,1	12,2	15,2	18,3	21,3
Deduct kg	318	1100	1500	2000	2400	2900

- The total load that can be lifted by the fixed jib is limited by rated jib loads. The total load that can be lifted with the upper boom point is limited by rated upper boom point loads.
- Boom lengths for fixed jib mounting are 27,4 m to 61,0 m.
- An upper boom point cannot be used on a 70,1 m boom length.
- The boom should be erected over the front of the crawlers, not laterally.
- Least stable position is over the side.
- 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	108	216	324	431	539

No. of parts of line	6	7	8	9	10
Maximum loads kN	647	755	863	971	1079

## Maximum load for fixed jib

No. of parts of line	1
Maximum loads kN	108

## Maximum load for upper boom point (on liftcrane boom)

No. of parts of line	1	2
Maximum loads kN	108	216

- 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.
- 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

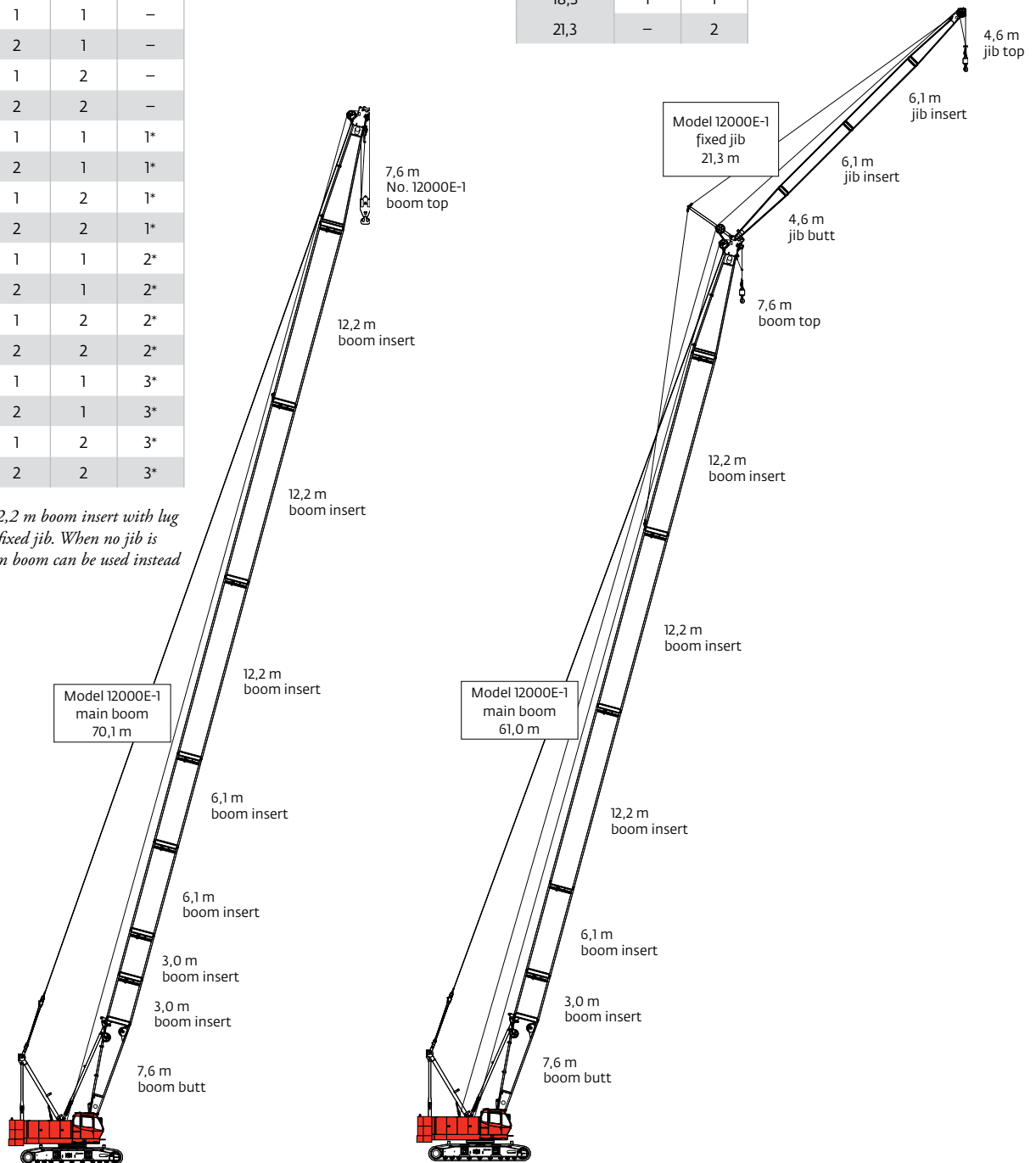
**No. 12000E-1 heavy-lift boom combinations**

Boom length m	Boom inserts		
	3,1 m	6,1 m	12,2 m
15,2	—	—	—
18,3	1	—	—
21,3	2	—	—
24,4	1	1	—
27,4	2	1	—
30,5	1	2	—
33,5	2	2	—
36,6	1	1	1*
39,6	2	1	1*
42,7	1	2	1*
45,7	2	2	1*
48,8	1	1	2*
51,8	2	1	2*
54,9	1	2	2*
57,9	2	2	2*
61,0	1	1	3*
64,0	2	1	3*
67,0	1	2	3*
70,1	2	2	3*

\* NOTE: One 12,2 m boom insert with lug A is required for fixed jib. When no jib is installed a 12,2 m boom can be used instead of A.

**No. 12000E-1 fixed jib combinations**

Fixed jib length m	Fixed jib inserts	
	3,1 m	6,1 m
9,1	—	—
12,2	1	—
15,2	—	1
18,3	1	1
21,3	—	2

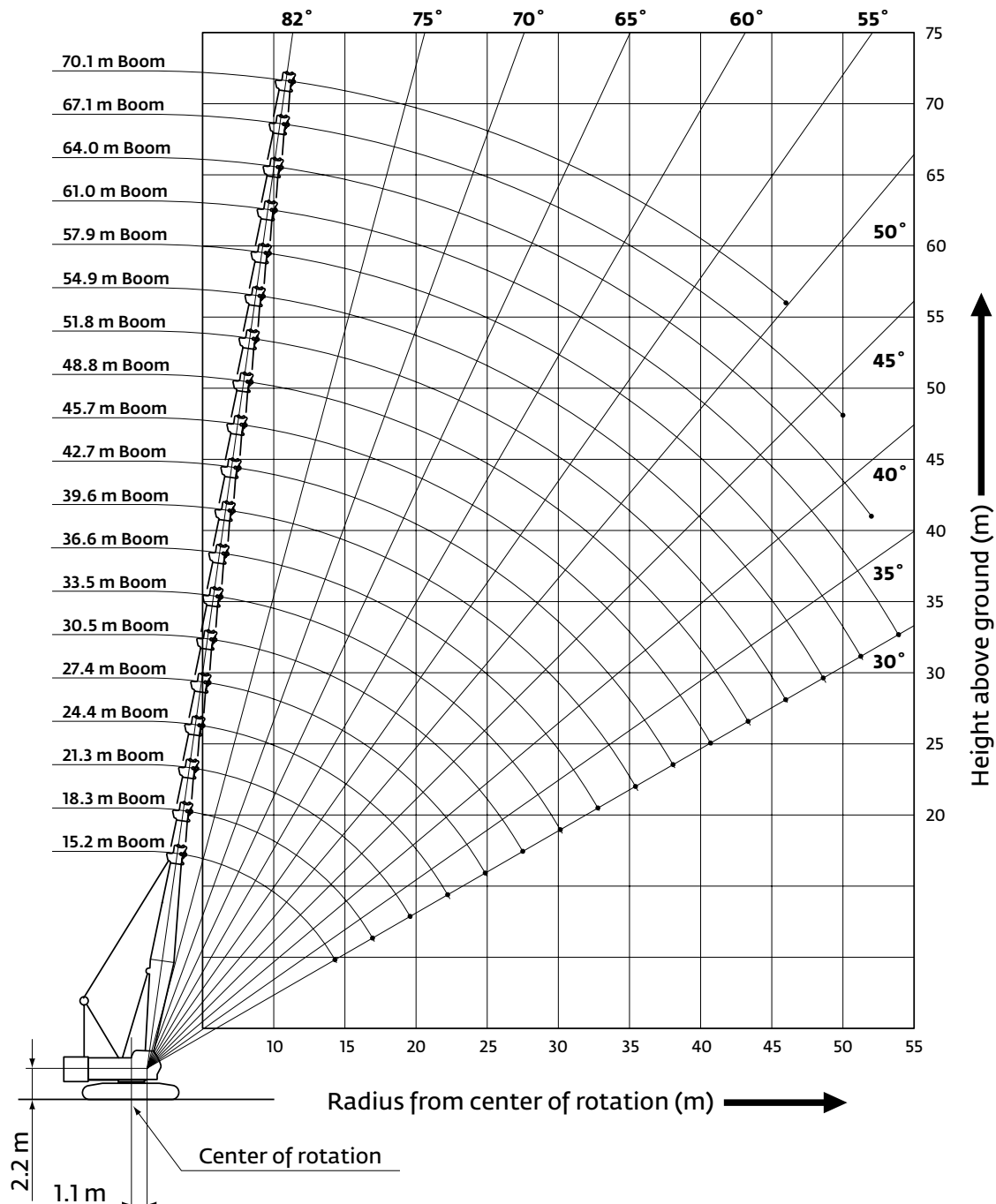


**Model 12000E-1  
Main boom  
70,1 m**

**Model 12000E-1  
Fixed jib on main boom  
82,3 m**

# Heavy-lift boom range diagram

No. 12000E-1 main boom





# Heavy-lift boom load charts

## Model 12000E-1 liftcrane boom capacities - 12000E-1 main boom

34 600 kg crane counterweight

6 500 kg carbody counterweight crawler extended

360° Rating

kg x 1 000

Boom m	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	57,9	61,0	64,0	67,1	70,1
Radius																			
3,0	3,6m / 110*																		
4,0	98,6*	4,1m / 95,3*	4,6m / 86,0*																
5,0	77,7*	77,7*	77,7*	77,0*	5,5m / 66,0*	5,9m / 58,9*													
6,0	62,2*	62,2*	62,2*	62,2*	60,7*	58,2*	6,4m / 52,4*	6,8m / 47,1*											
7,0	53,3*	53,2*	53,2*	53,1*	51,2*	49,4*	47,6*	46,0*	7,3m / 42,7*	7,8m / 38,9*									
8,0	44,5	44,4	44,4	44,2	44,2	42,7*	41,4*	40,1*	38,9*	37,7*	8,2m / 35,6*	8,7m / 32,9*							
9,0	37,6	37,5	37,4	37,3	37,3	37,2	36,5*	35,5*	34,5*	33,5*	32,4*	31,7*	9,1m / 30,4*	9,6m / 28,1*					
10,0	32,5	32,4	32,3	32,2	32,2	32,1	32,0	31,7*	30,9*	30,1*	29,1*	28,5*	27,7*	27,0*	26,1*	10,5m / 22,0*	10,9m / 22,0*	11,4m / 19,1*	11,9m / 15,0*
12,0	25,5	25,3	25,2	25,1	25,1	24,9	24,9	24,8	24,7	24,6	24,0*	23,6*	23,0*	22,4*	21,7*	21,4*	20,8*	18,4*	14,9*
14,0	20,8	20,7	20,6	20,4	20,4	20,3	20,2	20,1	20,0	19,9	19,8	19,7	19,4*	18,9*	18,4*	18,2*	17,6*	16,5*	13,1*
16,0	14,4m / 20,1	17,4	17,3	17,1	17,1	16,9	16,9	16,7	16,7	16,6	16,4	16,4	16,3	16,1	15,8*	15,6*	15,2*	14,8*	11,7*
18,0		17,1m / 16,0	14,8	14,7	14,6	14,5	14,4	14,3	14,2	14,1	13,9	13,9	13,8	13,6	13,5	13,5	13,2*	12,8*	10,4*
20,0			19,7m / 13,2	12,8	12,7	12,6	12,5	12,4	12,3	12,2	12,0	12,0	11,9	11,7	11,6	11,6	11,4	11,3	9,3
22,0				11,3	11,2	11,1	11,0	10,8	10,8	10,6	10,5	10,5	10,3	10,2	10,0	10,1	9,9	9,8	8,3
24,0				22,4m / 11,1	10,0	9,8	9,8	9,6	9,5	9,4	9,2	9,2	9,1	8,9	8,8	8,8	8,6	8,5	7,5
26,0					25,0m / 9,5	8,8	8,7	8,6	8,5	8,4	8,2	8,2	8,0	7,9	7,7	7,7	7,6	7,5	6,7
28,0						27,6m / 8,1	7,9	7,7	7,6	7,5	7,3	7,3	7,2	7,0	6,9	6,9	6,7	6,6	6,0
30,0							7,2	7,0	6,9	6,8	6,6	6,5	6,4	6,3	6,1	6,1	6,0	5,8	5,3
32,0							30,3m / 7,1	6,4	6,3	6,1	5,9	5,9	5,8	5,6	5,5	5,5	5,3	5,2	4,7
34,0								32,9m / 6,1	5,7	5,6	5,4	5,3	5,2	5,0	4,9	4,9	4,7	4,6	4,2
36,0									35,6m / 5,3	5,1	4,9	4,8	4,7	4,6	4,4	4,4	4,2	4,1	3,7
38,0										4,7	4,5	4,4	4,3	4,1	4,0	3,9	3,8	3,6	3,2
40,0										38,2m / 4,6	4,1	4,0	3,9	3,7	3,5	3,5	3,3	3,2	2,7
42,0											40,8m / 4,0	3,7	3,5	3,3	3,2	3,1	2,9	2,8	2,3
44,0												43,5m / 3,5	3,2	3,0	2,8	2,8	2,6	2,4	1,9
46,0													2,9	2,7	2,5	2,5	2,3	2,1	1,6
48,0													46,1m / 2,9	2,4	2,2	2,2	2,0	1,8	
50,0														48,8m / 2,3	2,0	1,9	1,7	1,6	
52,0															51,4m / 1,8	1,7	1,5		
54,0																1,5			

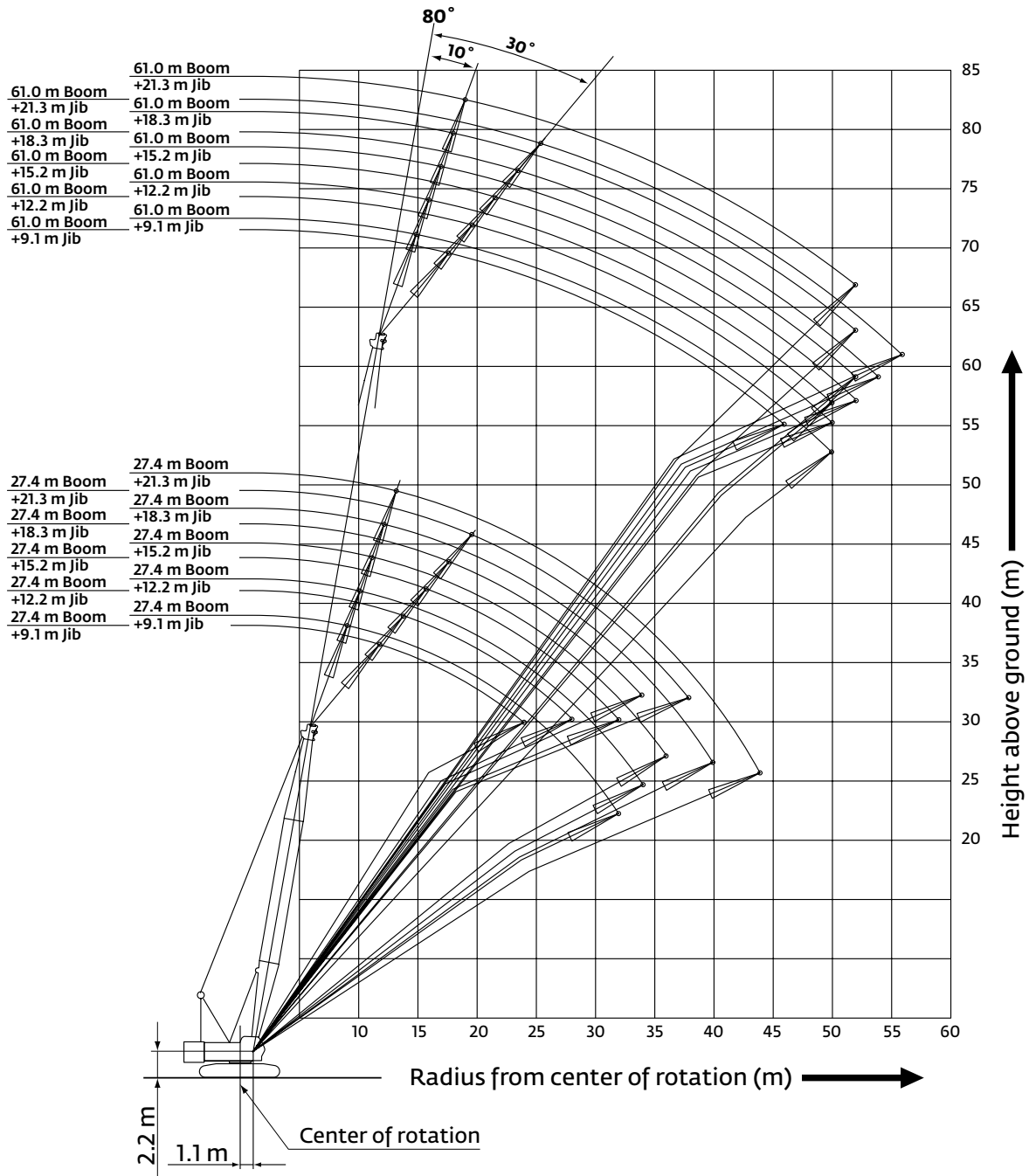
Meets EN13000 Requirements.

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. 12000E-1 fixed jib on main boom



# Fixed jib load charts

## Model 12000E-1 liftcrane fixed jib capacities

### No. 12000E-1 fixed jib on main boom

34 600 kg crane counterweight; 6 500 kg carbody counterweight crawler extended

360° Rating

kg x 1 000

10° offset

30° offset

Jib 9,1 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	10,0	10,9*						
	12,0	10,9*	10,9*	10,9*				
	16,0	10,9*	10,9*	10,9*	10,9*	10,9*	10,9*	10,9*
	22,0	10,9*	10,9*	10,9*	10,6*	10,4*	10,1	10,1
	28,0	8,2	7,9	7,7	7,4	7,2	6,9	6,8
	34,0		6,0	5,7	5,4	5,2	4,9	4,8
	40,0			4,3	4,0	3,8	3,5	3,4
	46,0				3,1	2,8	2,4	2,2
	50,0					2,2	1,7	1,6
	52,0					1,9		

Jib 9,1 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	12,0	9,5*						
	14,0	9,5*	9,5*	9,5*				
	18,0	9,5*	9,5*	9,5*	9,5*	9,5*	9,5*	9,5*
	22,0	9,1*	9,5*	9,5*	9,5*	9,5*	9,5*	9,5*
	26,0		8,8*	8,8	8,6	8,4	8,1	8,1
	30,0		7,3	7,1	6,8	6,7	6,4	6,3
	34,0				5,5	5,4	5,1	5,0
	38,0				4,6	4,4	4,1	4,0
	42,0						3,3	3,2
	46,0							2,4

Jib 12,2 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	12,0	10,9*	10,9*					
	16,0	10,9*	10,9*	10,9*	10,9*	10,9*	10,9*	10,9*
	18,0	10,9*	10,9*	10,9*	10,9*	10,9*	10,9*	10,9*
	24,0	9,4	10,0	9,8	9,5	9,3	9,0	9,0
	30,0	7,5	7,3	7,0	6,8	6,5	6,3	6,2
	36,0		5,5	5,3	5,0	4,8	4,5	4,4
	42,0			4,1	3,8	3,5	3,2	3,1
	48,0				2,9	2,6	2,2	2,1
	54,0					1,8		
	56,0					1,5		

Jib 12,2 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	14,0	7,0*						
	18,0	7,0*	7,0*	7,0*	7,0*	7,0*		
	22,0	6,7*	7,0*	7,0*	7,0*	7,0*	7,0*	7,0*
	26,0	6,1	6,4*	6,7*	7,0*	7,0*	7,0*	7,0*
	30,0		6,0*	6,3*	6,5*	6,8*	6,6	6,6*
	34,0			5,9	5,7	5,6	5,3	5,3
	38,0				4,7	4,5	4,3	4,2
	42,0					3,7	3,4	3,4
	46,0						2,7	2,6
	50,0							2,0

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 12000E-1 liftcrane fixed jib capacities

### No. 12000E-1 fixed jib on main boom

34 600 kg crane counterweight; 6 500 kg carbody counterweight crawler extended

360° Rating

kg x 1 000

#### 10° offset

#### 30° offset

Jib 18,3 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	14,0	9,8*	9,9*					
	16,0	9,6*	9,7*	9,8*	9,9*			
	18,0	8,9*	9,5*	9,7*	9,8*	9,8*	9,9*	9,9*
	24,0	6,7	7,4	8,0	8,6*	9,2*	9,3*	9,2*
	30,0	5,4	5,9	6,5	6,9	6,7	6,5	6,4
	36,0	4,5	5,0	5,4	5,2	4,9	4,7	4,6
	42,0		4,3	4,2	3,9	3,7	3,4	3,3
	48,0			3,3	3,0	2,8	2,4	2,3
	54,0				2,3	1,9	1,5	
	56,0				2,0	1,7		

Jib 18,3 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	18,0	4,2*						
	22,0	4,2*	4,2*	4,2*	4,2*	4,2*		
	26,0	4,1*	4,2*	4,2*	4,2*	4,2*	4,2*	4,2*
	30,0	3,7*	3,9*	4,1*	4,2*	4,2*	4,2*	4,2*
	34,0	3,4*	3,6*	3,8*	3,9*	4,1*	4,2*	4,2*
	38,0		3,4*	3,5*	3,7*	3,8*	3,9*	4,0*
	42,0			3,4*	3,5*	3,6*	3,7*	3,7*
	46,0					3,3*	3,0	3,0
	50,0					2,7	2,4	2,3
	54,0							1,7

Jib 21,3 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	14,0	7,1*						
	18,0	6,7*	6,8*	6,9*	7,0*	7,0*		
	24,0	6,0	6,4	6,5	6,6	6,7	6,7	6,8
	30,0	4,7	5,2	5,7	6,2	6,4	6,4	6,5
	36,0	3,9	4,3	4,8	5,2	5,0	4,7	4,6
	42,0	3,3	3,7	4,1	4,0	3,7	3,5	3,4
	48,0		3,3	3,3	3,1	2,8	2,4	2,3
	54,0			2,6	2,3	2,0	1,6	
	56,0				2,1	1,8		
	58,0				1,9			

Jib 21,3 m	Boom m	27,4	33,5	39,6	45,7	51,8	57,9	61,0
	Radius							
	20,0	4,2*						
	22,0	4,0*	4,1*	4,2*				
	26,0	3,5*	3,7*	3,8*	3,9*	4,0*	4,1*	4,1*
	30,0	3,2*	3,3*	3,5*	3,6*	3,7*	3,8*	3,8*
	34,0	2,9*	3,1*	3,2*	3,3*	3,4*	3,5*	3,6*
	38,0	2,7*	2,9*	3,0*	3,1*	3,2*	3,3*	3,4*
	42,0			2,8*	2,9*	3,0*	3,1*	3,2*
	46,0				2,8*	2,9*	3,0	3,0
	50,0				2,6	2,7	2,5	2,4
	56,0						1,7	1,6

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).

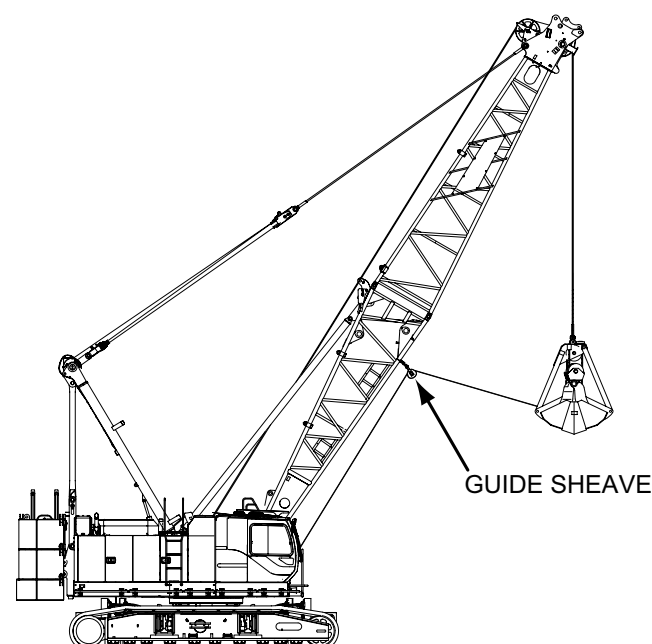
## Main hoist loads

No. of parts of line	1
Maximum loads	98 kN
Maximum loads	10,0 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 10 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. Bucket capacity (m<sup>3</sup>) x specified gravity of material (ton/m<sup>3</sup>) + bucket weight (ton) = 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

23,1 t counterweight  
(three upper counterweights, crawlers extended)  
kg x 1 000

Boom m	15,2	18,3	21,3	24,4
Radius				
7,0	10,0			
8,0	10,0	10,0		
9,0	10,0	10,0	10,0	
10,0	10,0	10,0	10,0	9,4
11,0	10,0	10,0	10,0	9,3
12,0	10,0	10,0	10,0	9,3
13,0	10,0	10,0	10,0	9,3
14,0	10,0	10,0	10,0	9,3
15,0		10,0	10,0	9,3
16,0		9,8	9,9	9,0
17,0			9,3	8,8
18,0			8,6	8,6
19,0			7,9	8,2
20,0				7,6
21,0				7,1

# 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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