



# 14010

*70 Ton Tele-Boom  
Crawler Crane*



**SPECIFICATIONS & LOAD CHARTS**

# Pure Excellence...

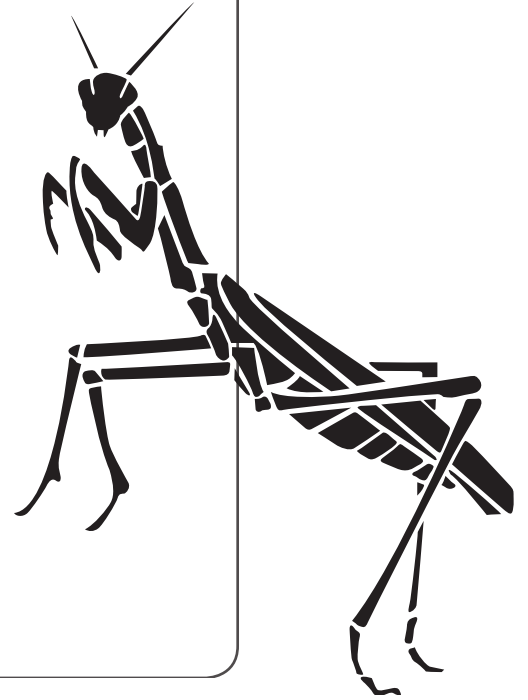
## *any way you like it.*

For over thirty years, Mantis telescopic boom crawler cranes have set the global standard with the dependability, versatility and performance expected of a market leader. Mantis cranes are built like no other. At their hearts, are massive steel fabrications, over-sized to handle the toughest jobs, year-in and year-out. Powerful state-of-the-art hydraulics coupled with diesel engines available in a choice of sizes match perfectly to meet the most rigorous of project demands.

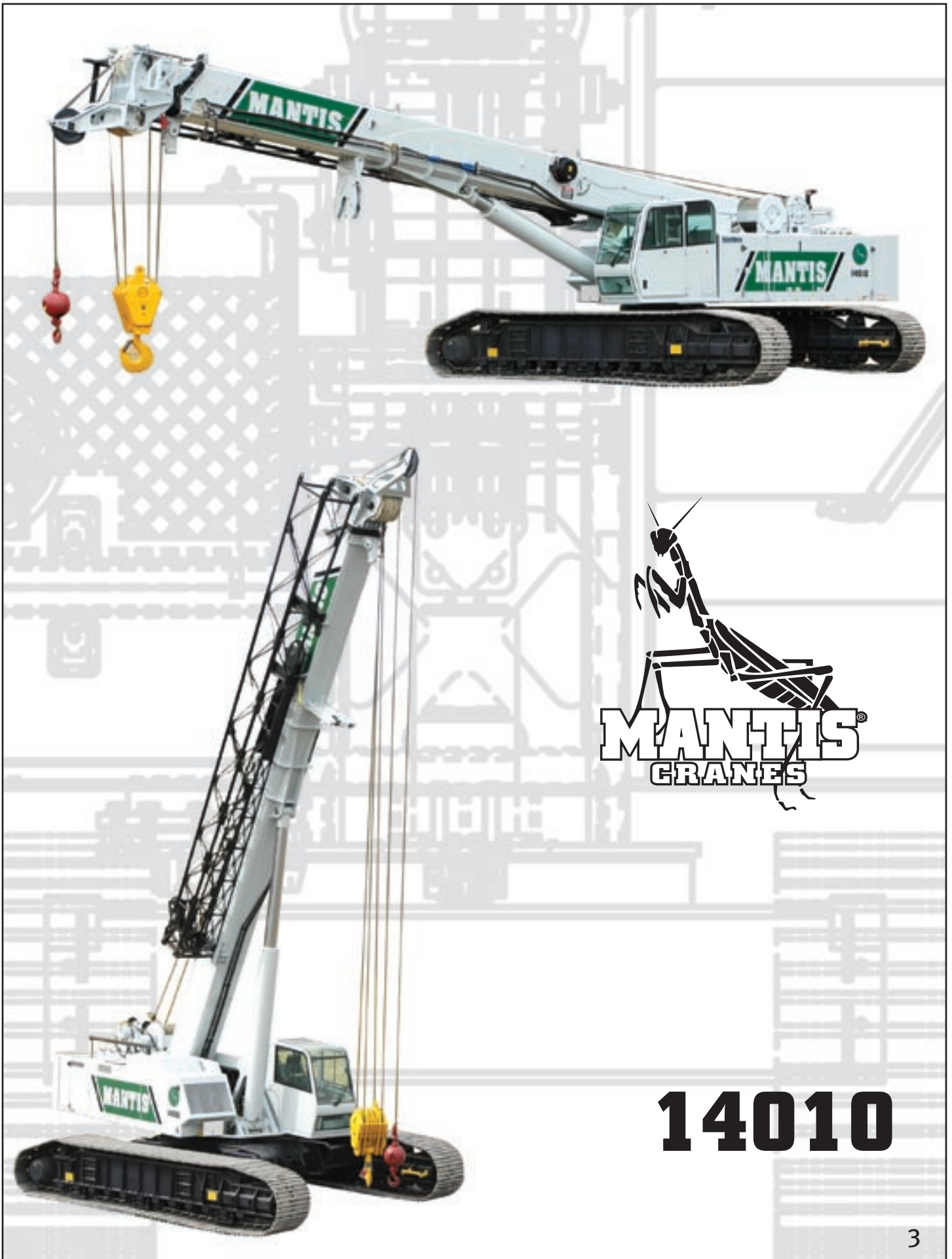
Mantis remains one of the few crane makers prepared and equipped to work with contractors and project engineers to develop customized lifting solutions that meet the most unusual of project challenges. Thanks to the versatile combination of heavy duty telescopic booms, hydraulically extendable crawlers, and extremely compact dimensions, Mantis cranes can often get closer to a job than bulkier, fixed length lattice boom crawler cranes or rubber-tired cranes that need outriggers to work effectively.

#### **No other crane combines so many valuable features:**

- Pick-and-carry the full crane load chart through 360°.
- Lift and walk...even with tracks retracted.
- Climb steeper grades more safely, thanks to minimized counterweight and low center of gravity.
- Pull through deep mud without bogging down.
- Telescope or lift the boom with a full load on the hook.
- Save time and money on the job due to its low clearance height, retract on-the-fly tracks and telescopic boom.
- Independent hydrostatic track drive allows pivot turns to run rings around RTs.
- Hydraulic tool circuit option powers wide choice of Mantis-approved tools.
- New luxury cab with state-of-the-art operator aids.
- Saves time and money on deployment and shipping with less haul vehicles, less time wasted on boom erection and fewer personnel on the erection crew.



# MANTIS



**14010**

# MANTIS® 14010

## 70 TON TELE-BOOM CRAWLER CRANE

Over 10-years of job-proven performance have given the Mantis 14010 an enviable reputation for dependability and round-the-clock performance. The 14010 saw its first major challenge as the key crane on one of the world's largest and most difficult jobs – Boston's Central artery highway project – known as "The Big Dig". Some fifteen 14010s operated for several years both above and underground at the heart of this tunneling and highway building project. Whether walking loads, working in tunnels or drilling foundations, the 14010 became indispensable to the project.

Rated at 70-ton (63.5-tonne) lifting capacity at a full 10ft (3m) radius, the Mantis 10010Mx can pick-and-carry its entire load chart through a full 360°. Such is the extraordinary stability of the 14010 that, with tracks extended, the crane can still make lifts with the main boom fully telescoped to 111ft 6ins (34m) and laid-out horizontally! Even with zero counterweight installed – to reduce working weight to about 100,000lbs (50-tonnes) for reduced ground bearing pressures - the 14010 can still pick-and-carry 60-tons (54.4-tonnes) or operate with its main boom fully extended and reach radii out to 90ft (28m)!

Lifting at height the 14010 also shows its strength with 35,000lbs at 25ft radius (15.3-tonnes @ 8m) on the fully elevated and telescoped main boom! For increased height the 14010 deploys lattice extensions offering 18,000lbs (8.2-tonnes) to 147ft (44.8m) tip height of 6,600lbs (3-tonnes) to 167ft (50.9m) on offsettable jibs.

Should narrow roadways demand lifting with tracks retracted for 12ft 6ins (3.51-3.81m) overall width, the 14010 can still walk with 70,600lbs (32-tonnes) on booms to 61ft (18.6m) or 44,000lbs (20-tonnes) on the fully telescoped main boom.

For a crane its capacity and reach, the 14010 has an extraordinarily low center of gravity with a minimum overhead clearance height of just 10ft 1ins (3.06m). And like all Mantis cranes, the 14010 doesn't depend upon massive counterweighting for its strength – for big counterweights are liabilities when climbing grades!

### KEY FEATURES INCLUDE:

- 70-tons (63.5-tonnes) pick-and-carry capacity at 10ft (3m) radius thru 360°.
- Sequence-synchronized four-section full power boom of 111ft 6ins (34m) length.
- Lattice boom extensions and offsettable jibs for up to 167ft (50.9m) tip height.
- 240 hp (179kW) diesel engine standard.
- Low ground bearing pressure of 9.3 psi (0.65 kg/cm<sup>2</sup>).
- Mantis-engineered in-situ auger options with optional hydraulic tool circuit.
- Fast two-speed independent hydrostatic track drive to 2.5 mph (4.0 km/hr).
- Full boom telescoping and boom lift under full hook load.
- 12ft 6ins (3.51-3.81m) minimum travel width according to tracks selected.
- Extraordinary 10ft 1ins (3.06m) overhead clearance height.
- New deluxe operators cab and standard LMI and Anti-Two-Block devices.
- Track contra-rotation allows pivot turns on the spot.
- 137,400lb (60-62.3-tonne) shipping weight fully equipped. Easily reduces to 100,000lbs (45-tonnes) with removal of counterweight and blocks.
- Steep 46% gradeability thanks to low center of gravity.
- Hydraulic on-the-fly track frame retraction and extension.
- Powerful 18,500lb (8.4-tonne) planetary main winch with full load single line speeds to 259 fpm (78.9 mpm) or 519 fpm (158 mpm) no-load speed.
- Optional Mantis WP-750 Heavy Duty Work Platform for up to 152ft (46.4m) working height.
- High 14ins (356mm) ground clearance helps avoid damage and snagging.



### RAILROAD

Two special short boom 14010s work in tandem as they demonstrate their pick & carry and low ground pressure capabilities at a remote and muddy derailment.



# ON THE JOB



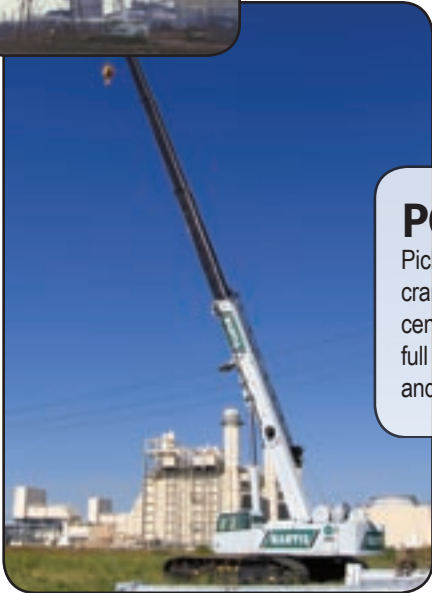
## TANK ERECTION

A Mantis 14010 and 6010 (inside tank) combine to work together at a gas transfer facility. Low clearance height and narrow width along with its pick-and-carry capability are a must to position plates.



## POWERLINE

Picking and walking with heavy, bulky and awkward loads like power towers is a challenge for most cranes and crane operators. To complete the job safely and efficiently, you need a crane with very low center of gravity and minimal counterweight to minimize backward tilting moment. When combined with full pick-and-carry capacity, minimum ground bearing pressure, maximum stability, strong, rigid structures and fine precision load control the Mantis becomes the ideal transmission line construction tool.



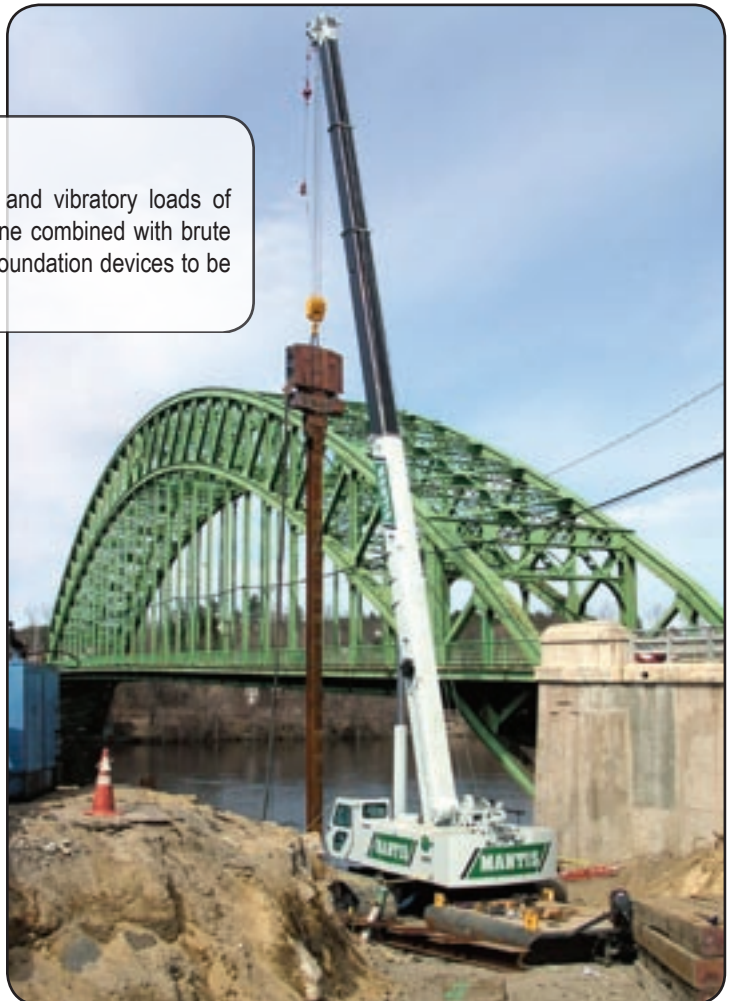
## FOUNDATION

Very few telescopic boom cranes are built to take the dynamic and vibratory loads of foundation work. Massive structural strength throughout the machine combined with brute force at the boom lift cylinder allows vibratory hammers and other foundation devices to be used with a Mantis.



## CONSTRUCTION

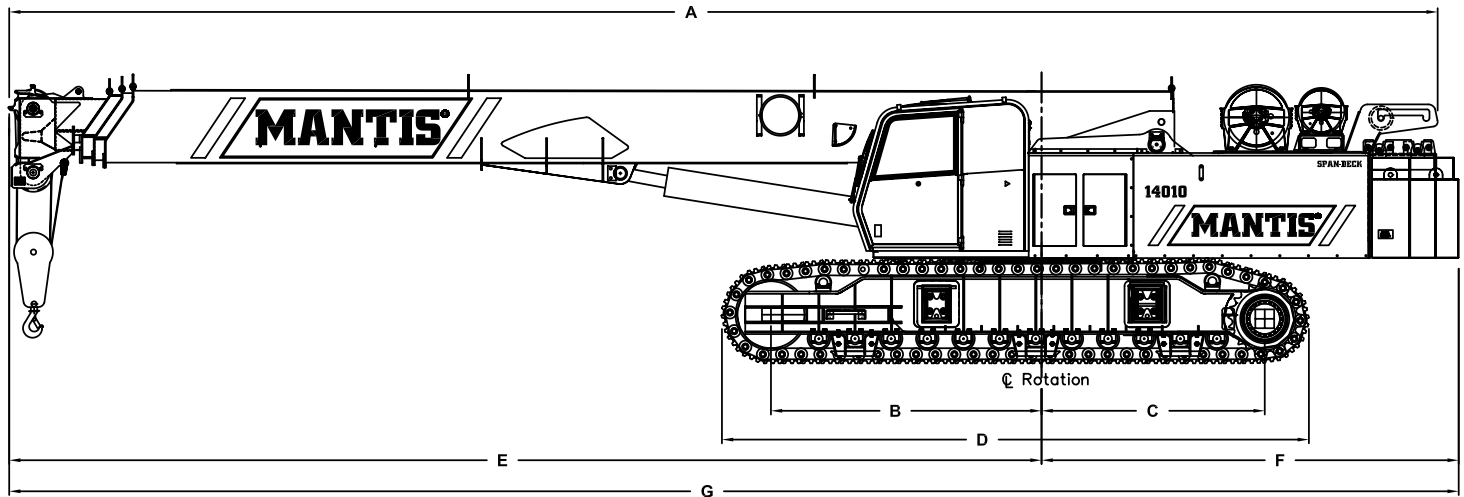
Mantis cranes make excellent tools for the vast variety of work involved in construction. Low clearance height, narrow working widths, full pick & carry capacity and the flexibility of telescopic adjustment of boom length eases the delicate placement of parking deck panels. Low ground bearing pressures allows these two cranes to maneuver on a concrete floor.



# SPECIFICATIONS

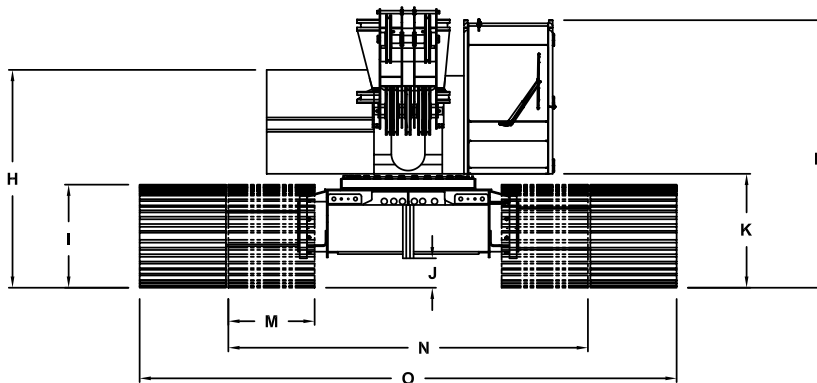
## MANTIS® 14010

### 70 TON TELE-BOOM CRAWLER CRANE



#### PRINCIPAL DIMENSIONS

A	Length (Counterweight Removed)	48 ft 3 in (14.71 m)
B	CL Front Track Drive to CL Rotation	9 ft 5 in (2.87 m)
C	CL Rear Track Drive to CL Rotation	7 ft 9 in (2.36 m)
D	Track Length	20 ft 5 in (6.22 m)
E	Boom Length to CL Rotation	34 ft 6 in (10.52 m)
F	Tailswing	14 ft 6 in (4.42 m)
G	Overall Length	49 ft 0 in (14.94 m)
H	Ground to Top of Engine Cover	8 ft 5 in (2.57 m)
I	Track Height	44 in (1.12 m)
J	Ground Clearance	12 in (305 mm)
K	Ground to Bottom of Cab	48 in (1.22 m)
L	Maximum Overall Height	10 ft 4 in (3.15 m)
M	Track Width	36 in (900 mm)
N	Overall Width (Tracks Retracted)	12 ft 6 in (3.81 m)
O	Overall Working Width	18 ft 8 in (5.69 m)



#### WIDTHS, WEIGHTS, AND GROUND PRESSURES\*

Shoe Width	Overall Width		Area	Ground Pressure	Working Weight
	Retracted	Extended			
24 in (609 mm)	11 ft 6 in (3.51 m)	17 ft 8 in (5.39 m)	9,900 in <sup>2</sup> (6.38 m <sup>2</sup> )	13.0 psi (0.91 kg/cm <sup>2</sup> )	128,490 lb (58,280 kg)
30 in (762 mm)	12 ft 0 in (3.66 m)	18 ft 2 in (5.54 m)	12,360 in <sup>2</sup> (7.97 m <sup>2</sup> )	10.5 psi (0.74 kg/cm <sup>2</sup> )	130,330 lb (59,120 kg)
36 in (900 mm)	12 ft 6 in (3.81 m)	18 ft 8 in (5.69 m)	14,850 in <sup>2</sup> (9.57 m <sup>2</sup> )	8.9 psi (0.63 kg/cm <sup>2</sup> )	132,154 lb (59,940 kg)

\* Crane equipped with: 111 ft 6 in boom, extension, jib, 70 ton hook block and 12 ton headache ball

# SPECIFICATIONS

## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE

### STANDARD CRANE AND EQUIPMENT

---

#### Boom

The boom consists of four full powered sections, 37 ft 6 in (11.43 m) retracted to 111 ft 6 in (33.99 m) fully extended. Maximum tip height is 117 ft (35.66 m).

#### Boom Telescoping & Elevating Systems

The telescoping system features two double-acting hydraulic cylinders and counterbalance lock valves. The elevating system features a cylinder and counterbalance lock valve which provide boom elevations from -1° to 78°.

#### Boom Head

Seven 19 in (483 mm) diameter, cast nylon sheaves on heavy-duty roller bearings are mounted in the boom head.

#### Load Moment Indicator & Anti-Two Block<sup>1</sup>

Standard Rated Capacity Limiter and Anti-Two Block system with audio-visual warning and control function shutdown. System's LCD screen provides a continuous electronic display of working boom length, boom angle, working load radius, tip height, parts-of-line (operator set), machine configuration, relative load moment, maximum permissible load and actual load.

The standard Work Area Definition system allows the operator to pre-set and define working areas. Should pre-set limits be approached, audio-visual warnings aid the operator in avoiding job-site obstructions. The anti-two block weight allows quick reeving of hook blocks.

### SUPERSTRUCTURE

---

#### Frame

The frame is an all-steel, welded structure, precision machined to accept attachment of the boom and swing components.

#### Operator's Cab

The fully-enclosed, air conditioned all-steel modular cab includes a lockable swinging door, acoustical lining, anti-slip floor and tinted safety glass. Sliding windows are located in the cab door and cab boom side. A vent window is positioned in the rear of the cab. Grab bars and steps are appropriately located for easy access to the cab. Erectable swing barricades are attached to the superstructure. Rear view cameras are appropriately located as are work lights.

Standard cab accessories include a two-speed windshield wiper, top glass wiper, defroster, heater, circulating fan, adjustable hand and foot throttles, six-way adjustable fabric seat with headrest, seat belt, dome light, and a dry-chemical fire extinguisher.

#### Instrumentation

Dash instrumentation features a tachometer, voltmeter, oil pressure gauge, temperature gauge, hour meter and fuel gauge. Indicators are provided for crane level, load moment, drum rotation, air filter restriction, hydraulic oil temperature and filter restriction, engine oil pressure and temperature.

A termination switch is located in the seat and armrest and is capable of immediately disabling all hydraulic functions as the operator rises from the seat or it can be activated by lifting the left hand armrest.

#### Control

Two-way hydraulic joysticks mounted in the operator's seat armrests control swing, auxiliary hoist, main winch and boom hoist. Four two-way hydraulic foot pedals control travel, swing service brake and boom telescoping functions. Travel pedal hand levers are available as an option. A fifth pedal controls engine speed.

#### Counterweight

The 30,000 lb (13,610 kg) counterweight system consists of two 15,000 lb (6,805 kg) pieces. Each can be removed and installed via a pendant attached to the boom.

#### Swing

The superstructure rotates 360° around a shear ball slew bearing with an external gear that matches with the swing drive pinion and bolts to the superstructure and the carbody. The hydraulic swing drive powers the system and consists of a gear motor driving into a planetary reducer with a shaft mounted pinion providing infinitely variable speeds of up to 3 rpm.

Swing braking is achieved through a "failsafe", hydraulically released, spring applied, multi-disc wet brake which includes a foot applied service brake. The brake can be electrically actuated through a cab mounted switch into a "locked-on" (parking) mode. A two position house lock system is included. Regular lubrication of the bearing is achieved through a cab mounted grease applicator.

#### Fuel System

A 100 US gal (378 l) tank is bolted to the superstructure. The fuel filtration system consists of an inline fuel/water separator as well as an engine mounted fuel filter.

#### Hydraulic System

The load sensing, open-loop hydraulic system is served by two variable volume pumps mounted in tandem. The pumps are horsepower limiting and pressure compensated providing a maximum output of 168 gpm (636 l/min) @ 2,200 rpm and maximum operating pressure of 4,850 psi (339.5 kg/cm<sup>2</sup>). An extra circuit is included for ready adaptation to hydraulic accessories.

The system includes two pilot operated valve banks that are pressure and flow compensated. The 300 US gal (1,136 l) capacity hydraulic oil reservoir has a spin-on filler-breather cap, external sight gauge, clean-out access and a sump type drain. An air to oil remote mounted cooler provides oil cooling with thermostatically-controlled, electrically driven fans. Hydraulic oil filtering is achieved with two 5 micron full flow cartridge type filters designed to return in-tank with bypass protection and an electronic bypass indicator.

(System pressure test ports with quick disconnect fittings are provided for diagnostics.)

# SPECIFICATIONS

## MANTIS® 14010

### 70 TON TELE-BOOM CRAWLER CRANE

#### MAIN HOIST

Planetary geared two-speed winch includes a bent axis, variable displacement hydraulic motor and a multi-disc internal brake.										
Rope Layer	Maximum Line Pull		Full Load Line Speed		Pitch Diameter		Layer		Total	
1	21,400 lb	9,707 kg	158 ft/min	48 m/min	16.8 in	425.4 mm	109.0 ft	33.2 m	109.0 ft	33.2 m
2	19,540 lb	8,863 kg	173 ft/min	53 m/min	18.1 in	459.4 mm	203.0 ft	62.0 m	228.0 ft	69.5 m
3	17,970 lb	8,151 kg	188 ft/min	57 m/min	19.4 in	493.4 mm	220.0 ft	67.0 m	358.0 ft	109.0 m
4	16,640 lb	7,548 kg	204 ft/min	62 m/min	20.8 in	527.4 mm	237.0 ft	72.0 m	498.0 ft	152.0 m
5	15,490 lb	7,026 kg	219 ft/min	67 m/min	22.1 in	561.3 mm	253.0 ft	77.0 m	649.0 ft	198.0 m
6	14,500 lb	6,577 kg	234 ft/min	71 m/min	23.4 in	595.3 mm	270.0 ft	82.0 m	810.0 ft	247.0 m

#### AUXILIARY HOIST

Planetary geared two-speed winch includes a bent axis, variable displacement hydraulic motor and a multi-disc internal brake. Wire Rope: 350 ft (107 m) 3/4" (19 mm) 6 x 37 EIPS, IWRC, RRL. Line pulls are not based on wire rope strength. Drum rotation indicator is standard.										
Rope Layer	Maximum Line Pull		Full Load Line Speed		Pitch Diameter		Layer		Total	
1	17,500 lb	7,940 kg	180 ft/min	54.9 m/min	11.5 in	292.1 mm	64.0 ft	19.6 m	64.0 ft	19.6 m
2	15,400 lb	6,990 kg	197 ft/min	60.0 m/min	12.8 in	326.1 mm	72.0 ft	21.9 m	136.0 ft	41.4 m
3	13,800 lb	6,260 kg	208 ft/min	63.4 m/min	14.2 in	360.0 mm	79.0 ft	24.1 m	215.0 ft	65.6 m
4	12,500 lb	5,670 kg	219 ft/min	66.8 m/min	15.5 in	394.0 mm	87.0 ft	26.4 m	302.0 ft	92.0 m
5	11,500 lb	5,220 kg	235 ft/min	71.6 m/min	16.8 in	428.0 mm	94.0 ft	28.7 m	396.0 ft	120.6 m

#### STANDARD ENGINE

Cummins QSB240 (U.S. EPA Tier 3)					
Noise Emissions: Top 96.3 dBA (excludes noise from intake, exhaust, cooling system and driven components)					
Type	6 Cylinder Water Cooled	Weight (Wet)	1056 lb (479 kg)	Aspiration	Turbocharged & Aftercooled
Displacement	360 cu in (5.9 l)	Oil Capacity	17.2 US quarts (16.3 l)	Air filter	Dry Type
Bore	4.02 in (102 mm)	Rated Horsepower	240 (179 kw) @ 2200 rpm	Electrical	12 volt
Stroke	4.72 in (120 mm)	Peak Torque	652 ft-lb (884 Nm) @ 1500 rpm	Alternator	100 amp

#### MACHINE WEIGHTS

STANDARD CRANE WITH 4 SECTION 111 ft 6 in (33.99 m) BOOM, 2 PIECE COUNTERWEIGHT & 36 in (914 mm) TRACK SHOES	127,750 lb	57,950 kg
Crane Less Counterweights and Track Frames	61,300 lb	27,810 kg
Counterweight, 2 pieces 15,000 lb (6,805 kg) each	30,000 lb	13,610 kg
Track Frames, 2 pieces 18,000 lb (8,165 kg) each	36,000 lb	16,330 kg
OPTIONAL EQUIPMENT		
Alternative Boom 54 ft (16.46 m) three section boom in place of standard boom**	(8,300) lb	(3,760) kg
Alternative Boom 40 ft (12.19 m) two section boom in place of standard boom**	(11,900) lb	(5,400) kg
30 ft (9.14 m) Lattice Extension	1,700 lb	771 kg
20 ft (6.10 m) Jib (connects to head of Lattice Extension ONLY)	700 lb	318 kg
Auxiliary Winch with Standard Rope	962 lb	436 kg
Auxiliary Nose Sheave	210 lb	95 kg
12 ton (11 mt) Headache Ball	404 lb	200 kg
70 ton (64 mt) Hook Block	1,600 lb	726 kg
Auger Ready Package	440 lb	200 kg
Complete Auger Package	1,520 lb	690 kg
60 in (1.52 m) Auger Kelly Bar	120 lb	54 kg
72 in (1.83 m) Auger Kelly Bar	140 lb	64 kg

\* Deduction from Standard Crane Weight



## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE

### UNDERCARRIAGE

#### Carbody

The welded steel, box type carbody is fabricated with square axles to accept the crawler side frames. The top surface is precision machined to receive the swing bearing.

#### Side Frames

Two welded steel removable side frames are paired with a track group consisting of twelve bottom and two top oil-filled & sealed rollers. Each frame includes an oil-filled, self-lubricating idler and spring type, track tensioning device. Standard track shoes are 36 in (900 mm) wide, 3-bar semi-grousers. Optional shoes are available in 30 in (762 mm) width flat pad and semi-grouser configuration; 36 in flat pads are also available. The side frames extend and retract hydraulically and are electrically controlled from the cab.

### OPTIONAL EQUIPMENT

#### Booms

- **Three Section Boom:** hydraulically proportional full power boom, 26 ft (7.93 m) retracted to 54 ft (16.46 m) extended, maximum tip height of 55 ft 8 in (17.27 m).
- **Two Section Boom:** hydraulically proportional full power boom, 26 ft (7.93 m) retracted to 40 ft (12.19 m) extended, maximum tip height of 47 ft 10 in (14.58 m).

#### Boom Attachments

- **Boom Extension:** 30 ft (9.14 m) lattice type swingaway, stores alongside of the boom base section and used with or without the optional 20 ft (6.10 m) jib. Head contains two 19 in (483 mm) diameter high strength cast nylon sheaves mounted on heavy-duty roller bearings, reeving up to 2 parts of wire rope, with optional extension deployed maximum tip height is 147 ft (44.81 m).
- **Boom Jib:** 20 ft (6.10 m) lattice type swingaway, attaches to and stores alongside the extension and can only be used with the extension deployed. Offsets are at 15° & 30°; with optional jib and extension deployed maximum tip height is 167 ft (50.90 m).
- **Auxiliary Nose Sheave:** quick reeve, single 19 in (483 mm) diameter high-strength, cast nylon sheave mounted on a heavy-duty roller bearing boom tip adapter.
- **Wire Rope:** rotation resistant, (non-spin) Dyform-18 HSLR.
- **Headache Ball:** 12 ton (11 mt) ball includes a swivel hook with safety latch.
- **Hook Block:** 70 ton (63 mt) hook block consists of five 19 in (483 mm) diameter sheaves mounted on heavy-duty roller bearings with a swivel hook and safety latch.

#### Travel

Each side frame contains a pilot controlled, two-speed track drive. The drives are hydraulic piston motors which propel the crane at a low speed of 1.5 mph (2.4 km/hr) and at a high speed of 2.5 mph (4.0 km/hr). The internal brake system is spring applied and automatically released upon actuation of the travel system.

The hydraulic travel system provides skid steering and track counter rotation and achieves an unladen gradeability of 46%.

#### Hydraulic

- **Auxiliary Hoist:** planetary geared two-speed winch includes a bent axis, variable displacement hydraulic motor and a multi-disc internal brake.
- **Auger Ready Package:** includes hoses, fasteners and stowage bracket assembly mounted to the base section of the boom with a flow capability of 34 gpm (130 l/min).
- **Complete Auger Package:** adds a two speed auger motor/gear box and one 60 in (1.52 m) kelly bar to the Auger Ready Package.
- **Tool Circuit:** provides 6 gpm (23 l/min) and 12 gpm (45 l/min) at 2,500 psi (176 kg/cm<sup>2</sup>) through a 50 ft (15.24 m) twin hose reel with quick disconnect fittings to operate open center tools.

#### Other Options

- **Free Fall Hoists:** all winches are available in free fall and controlled free fall configurations.
- **Crane Cab Access Walkways:** a pair of 54.5 in (1 384 mm) wide x 25 in (635 mm) deep walkways which attach to both the front and rear of the carbody and allow for easier egress and ingress to the operator's cab when the crane's upper rotating frame is not aligned front to rear.
- **Model WP750 Work Platform:** 36 in x 72 in (914 mm x 1 828 mm), all-steel, welded, two-person platform with a maximum capacity of 750 lb (340 kg). A test weight and boom head adapter are included in the package. Operation and control are by the crane operator from the cab. Radio (RF) controls to enable remote operation from the platform are available.

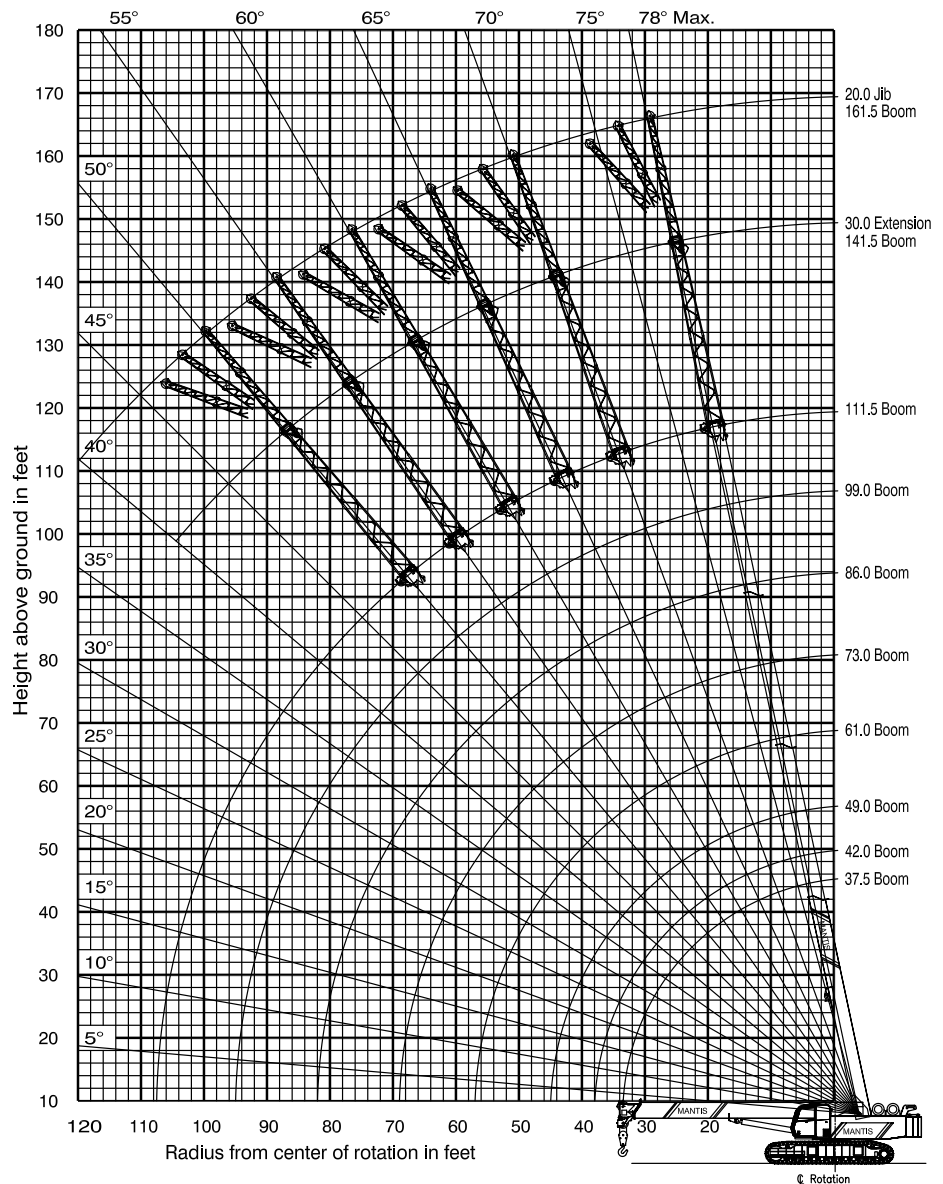
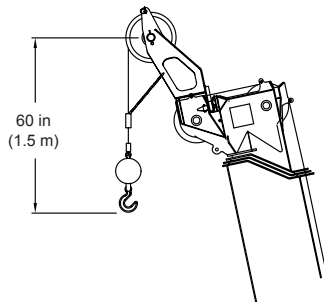
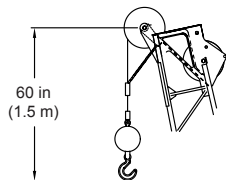
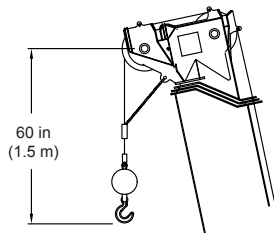
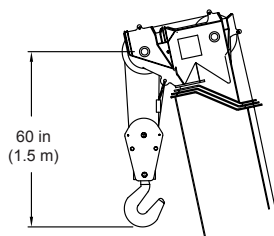
(See separate WP750 Specification for a complete description of standard and optional Work Platform equipment.)

\*Load moment indicating and anti-two block systems are operator aids and must never be used in lieu of job site lift planning calculations by the operator which must take into account ground conditions, weather and all other environmental factors prevailing at the time of the lift. Prices and specifications are subject to change at any time without prior notice and are for factory installation at time of original manufacture. F.O.B Plant; Richlands, VA 24641. Illustrations and photographs may show optional equipment. Supercedes all previous issues. Please see [www.mantiscranes.com](http://www.mantiscranes.com) for most current information.

# LOAD CHARTS

## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE

111 FT 6 IN MAIN BOOM, 30 FT EXTENSION & 20 FT JIB



\* Capacity based on maximum obtainable boom angle.

° Boom angles are stated in degrees.



THESE CHART VALUES ARE ONLY A GUIDE AND MUST NOT BE USED TO OPERATE THE CRANE. USE ONLY THE IN CAB LOAD CHARTS AND OPERATOR'S MANUAL FURNISHED WITH THE CRANE.

# LOAD CHARTS

## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE

### LIFTING CAPACITIES

IN THOUSANDS OF POUNDS; 360°, 75% OF TIPPING, FIRM & LEVEL GROUND

MAIN BOOM with TRACKS FULLY EXTENDED																													
30,000 lb COUNTERWEIGHT										15,000 lb COUNTERWEIGHT								ZERO COUNTERWEIGHT											
RADIUS (ft)	NO TRAVEL	MAIN BOOM LENGTH (ft)									MAIN BOOM LENGTH (ft)								MAIN BOOM LENGTH (ft)								RADIUS (ft)		
		37.5	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5			
10		140.0	120.0	90.0	86.0	79.0*					120.0	90.0	86.0	79.0*					120.0	90.0	86.0	79.0*						10	
		70.1°	70.1°	70.1°	70.1°	70.1°					70.1°	70.1°	70.1°	70.1°					70.1°	70.1°	70.1°	70.1°						10	
12		124.6	100.0	88.0	84.0	72.6*					100.0	88.0	84.0	72.6*					100.0	88.0	84.0	72.6*						12	
		66.8°	66.8°	69.4	72.5	76.0					66.8°	69.4	72.5	76.0					66.8°	69.4	72.5	76.0						12	
15		98.3	90.0	83.0	78.0	71.5	48.0	44.0*			90.0	83.0	78.0	71.5	48.0	44.0*			70.2	69.5	68.6	67.5	48.0	44.0*				15	
		61.6°	61.6°	64.9°	68.7°	73.1°	75.9°	78.1°			61.6°	64.9°	68.7°	73.1°	75.9°	78.1°			61.6°	64.9°	68.7°	73.1°	75.9°	78.1°				15	
20		72.0	72.0	71.7	71.3	66.5	43.0	40.0	38.1*		56.2	55.6	55.0	54.2	43.0	40.0	38.1*		38.6	38.0	37.4	36.5	37.8	38.8	38.1*			20	
		52.2°	52.2°	57.0°	62.2°	68.1°	71.8°	74.7°	76.7°		52.2°	57.0°	62.2°	68.1°	71.8°	74.7°	76.7°		52.2°	57.0°	62.2°	68.1°	71.8°	74.7°	76.7°			20	
25			51.0	50.5	49.9	49.2	41.0	39.0	36.0	35.0*	37.8	37.3	36.8	36.1	37.2	38.1	36.0	35.0*	25.3	24.8	24.2	23.5	24.7	25.5	26.1	35.0*		25	
			41.4°	48.2°	55.3°	62.9°	67.6°	71.2°	73.7°	75.6°	41.4°	48.2°	55.3°	62.9°	67.6°	71.2°	73.7°	75.6°	41.4°	48.2°	55.3°	62.9°	67.6°	71.2°	73.7°	75.6°		25	
30			37.8	37.4	36.9	36.3	37.3	34.5	31.5	30.8	27.5	27.2	26.7	26.0	26.7	27.4	28.3	28.9	17.9	17.5	17.0	16.4	17.4	18.2	18.8	19.2		30	
			27.0°	37.8°	47.6°	57.4°	63.3°	67.6°	70.7°	72.9°	27.0°	37.8°	47.6°	57.4°	63.3°	67.6°	70.7°	72.9°	27.0°	37.8°	47.6°	57.4°	63.3°	67.6°	70.7°	72.9°		30	
35				29.2	28.7	28.1	29.1	29.8	27.0	26.3		20.8	20.4	19.8	20.7	21.3	21.5	22.0		12.9	12.5	11.9	12.8	13.6	14.1	14.5		35	
				23.7°	38.8°	51.5°	58.7°	63.9°	67.6°	70.2°		23.7°	38.8°	51.5°	58.7°	63.9°	67.6°	70.2°		23.7°	38.8°	51.5°	58.7°	63.9°	67.6°	70.2°		35	
40					23.0	22.5	23.4	24.1	24.0	21.7				15.5	13.8	14.4	15.0	15.6	16.2				9.3	8.7	9.6	10.4	10.9	11.2	40
					27.7°	45.1°	54.0°	60.1°	64.4°	67.4°				27.7°	45.1°	54.0°	60.1°	64.4°	67.4°				27.7°	45.1°	54.0°	60.1°	64.4°	67.4°	40
45					20.9	18.3	19.2	19.9	20.4	19.0				14.8	12.2	13.1	13.7	14.3	14.5				9.0	6.4	7.3	8.0	8.5	8.9	45
					3.1°	37.8°	48.9°	56.1°	61.1°	64.6°				3.1°	37.8°	48.9°	56.1°	61.1°	64.6°				3.1°	37.8°	48.9°	56.1°	61.1°	64.6°	45
50						15.2	16.0	16.7	17.1	16.9				9.8	10.7	11.3	11.8	12.2					4.7	5.6	6.2	6.7	7.1	50	
						29.0°	43.3°	52.0°	57.7°	61.7°				29.0°	43.3°	52.0°	57.7°	61.7°					29.0°	43.3°	52.0°	57.7°	61.7°	50	
55						13.0	13.9	14.1	14.2	14.3				7.9	8.7	9.4	9.9	10.2					3.3	4.2	4.8	5.3	5.6	55	
						16.0°	37.1°	47.6°	54.2°	58.7°				16.0°	37.1°	47.6°	54.2°	58.7°					16.0°	37.1°	47.6°	54.2°	58.7°	55	
60							11.9	12.0	12.1	12.2					7.2	7.8	8.3	8.6						3.0	3.7	4.2	4.5	60	
							29.8°	42.8°	50.5°	55.7°					29.8°	42.8°	50.5°	55.7°						29.8°	42.8°	50.5°	55.7°	60	
65							9.8	9.9	10.0	10.1					5.9	6.5	7.0	7.3						2.1	2.8	3.2	3.5	65	
							20.1°	37.5°	46.6°	52.4°					20.1°	37.5°	46.6°	52.4°						20.1°	37.5°	46.6°	52.4°	65	
70								8.1	8.2	8.4						5.4	5.9	6.2							2.0	2.4	2.7	70	
								31.5°	42.4°	49.1°						31.5°	42.4°	49.1°							31.5°	42.4°	49.1°	70	
75								7.3	7.4	7.5						4.5	5.0	5.3							1.3	1.7	2.1	75	
								24.2°	37.8°	45.6°						24.2°	37.8°	45.6°							24.2°	37.8°	45.6°	75	
80								6.6	6.7	6.9						3.7	4.1	4.5							0.7	1.2	1.5	80	
								13.3°	32.7°	41.8°						13.3°	32.7°	41.8°							13.3°	32.7°	41.8°	80	
85									6.3	6.4							3.5	3.8								0.7	1.0	85	
									26.7°	37.7°							26.7°	37.7°								26.7°	37.7°	85	
90									5.6	5.7							2.8	3.2								NR	0.5	90	
									19.1°	33.2°							19.1°	33.2°								NR	33.2°	90	
95									4.9	5.2							2.3	2.6								NR	NR	95	
									1.5°	28.1°							1.5°	28.1°								NR	NR	95	
100										4.6								2.1									NR	100	
										21.8°								21.8°									NR	100	
105										4.0								1.7									NR	105	
										12.9°								12.9°									NR	105	



THESE CHART VALUES ARE ONLY A GUIDE AND MUST NOT BE USED TO OPERATE THE CRANE. USE ONLY THE IN CAB LOAD CHARTS AND OPERATOR'S MANUAL FURNISHED WITH THE CRANE.







# LOAD CHARTS

## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE

### LIFTING CAPACITIES

IN THOUSANDS OF POUNDS; 360°, 75% OF TIPPING, FIRM & LEVEL GROUND

MAIN BOOM with TRACKS FULLY RETRACTED			
30,000 lb COUNTERWEIGHT			
RADIUS (ft)	MAIN BOOM LENGTH (ft) 37.5 to 61.0	MAIN BOOM LENGTH (ft) 61.0 to 111.5	RADIUS (ft)
15	70.6	44.0	15
20	46.7	38.4	20
25	33.5	33.5	25
30	24.5	24.5	30
35	19.2	19.2	35
40	15.8	15.8	40
45	13.2	13.2	45
50	10.7	10.7	50
55	8.8	8.8	55
60	7.2	7.2	60
65	6.0	6.0	65
70	5.0	5.0	70

30' EXTENSION & 20' JIB								
with TRACKS FULLY EXTENDED								
30' EXTENSION					20' JIB			
Boom Angle	30,000 lb COUNTERWEIGHT		15,000 lb COUNTERWEIGHT		30,000 lb or 15,000 lb COUNTERWEIGHT			Boom Angle
	Total Boom Length (ft)		Total Boom Length (ft)		Jib Offset Angles			
	67.5 to 129	> 129.0	67.5 to 103.0	> 103.0	0°	15°	30°	
78°	18.0	18.0	18.0	18.0	6.6	4.0	2.2	78°
75°	13.6	13.6	13.6	13.6	6.3	4.0	2.1	75°
72°	11.5	11.5	11.5	11.5	5.6	3.5	2.0	72°
70°	10.1	10.1	10.1	10.1	5.1	3.2	1.9	70°
68°	8.9	8.9	8.9	8.9	4.6	3.0	1.8	68°
65°	8.0	8.0	8.0	8.0	4.2	2.8	1.8	65°
62°	7.2	7.2	7.2	6.3	3.9	2.6	1.7	62°
60°	6.7	6.7	6.7	5.4	3.5	2.4	1.7	60°
58°	6.1	6.1	6.1	4.5	3.2	1.9	1.4	58°
55°	5.8	5.8	5.8	3.6	2.6	1.3	1.0	55°
52°	5.3	5.3	5.3	2.8	2.0	0.6	0.4	52°
50°	5.1	5.1	5.1	2.3	1.5	0.3	0.2	50°
48°	4.9	4.6	4.9	1.9				48°
45°	4.6	4.0	4.6	1.4				45°

WEIGHT REDUCTIONS	
LOAD HANDLING DEVICES	
HOOKBLOCK: 70 Ton - 5 Sheave	1900 lbs
OVERHAUL BALL: 12 Ton w/Swivel	396 lbs
OPTIONAL HANDLING DEVICES	
30 ft. Extension - Stowed**	350 lbs
30 ft. Extension - Erected**	2000 lbs
30 ft. Ext. and 20 ft. Jib - Stowed**	750 lbs
30 ft. Ext. and 20 ft. Jib - Erected**	3500 lbs
Auxillary Nose Sheave**	250 lbs

\*\* Reduction of main boom capacities.

ZERO DEGREE BOOM ANGLE			
MAXIMUM CAPACITY			
with TRACKS FULLY EXTENDED			
30,000 lb COUNTERWEIGHT			
BOOM LENGTH (ft)	RADIUS (ft)	LOAD (lbs) (x 1000)	BOOM LENGTH (ft)
37.5	33.5	30.6	37.5
42.0	38.0	24.3	42.0
49.0	45.0	20.9	49.0
61.0	57.0	11.5	61.0
73.0	69.0	8.2	73.0
86.0	82.0	7.0	86.0
99.0	95.0	4.9	99.0
111.5	107.5	4.1	111.5



THESE CHART VALUES ARE ONLY A GUIDE AND MUST NOT BE USED TO OPERATE THE CRANE. USE ONLY THE IN CAB LOAD CHARTS AND OPERATOR'S MANUAL FURNISHED WITH THE CRANE.



# LOAD CHARTS

## MANTIS® 14010

### 70 TON TELE-BOOM CRAWLER CRANE

#### LIFTING CAPACITIES

IN THOUSANDS OF POUNDS; 360°, 75% OF TIPPING, FIRM & LEVEL GROUND

AUXILIARY NOSE SHEAVE with TRACKS FULLY EXTENDED																										
30,000 lb COUNTERWEIGHT									15,000 lb COUNTERWEIGHT									ZERO COUNTERWEIGHT								
RADIUS (ft)	MAIN BOOM LENGTH (ft)								MAIN BOOM LENGTH (ft)									MAIN BOOM LENGTH (ft)								RADIUS (ft)
	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5	37.5	42.0	49.0	61.0	73.0	86.0	99.0	111.5		
10	11.0	11.0	11.0	11.0*					11.0	11.0	11.0	11.0*					11.0	11.0	11.0	11.0*					10	
	70.1°	70.1°	70.1°	70.1°					70.1°	70.1°	70.1°	70.1°					70.1°	70.1°	70.1°	70.1°						
12	11.0	11.0	11.0	11.0*					11.0	11.0	11.0	11.0*					11.0	11.0	11.0	11.0*					12	
	66.8°	69.4°	72.5°	76.0°					66.8°	69.4°	72.5°	76.0°					66.8°	69.4°	72.5°	76.0°						
15	11.0	11.0	11.0	11.0	11.0	11.0*			11.0	11.0	11.0	11.0	11.0	11.0*			11.0	11.0	11.0	11.0	11.0	11.0*			15	
	61.6°	64.9°	68.7°	73.1°	75.9°	78.1°			61.6°	64.9°	68.7°	73.1°	75.9°	78.1°			61.6°	64.9°	68.7°	73.1°	75.9°	78.1°				
20	11.0	11.0	11.0	11.0	11.0	11.0	11.0*		11.0	11.0	11.0	11.0	11.0	11.0	11.0*		11.0	11.0	11.0	11.0	11.0	11.0	11.0*		20	
	52.2°	57.0°	62.2°	68.1°	71.8°	74.7°	76.7°		52.2°	57.0°	62.2°	68.1°	71.8°	74.7°	76.7°		52.2°	57.0°	62.2°	68.1°	71.8°	74.7°	76.7°			
25	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0*	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0*	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0*	25	
	41.4°	48.2°	55.3°	62.9°	67.6°	71.2°	73.7°	75.6°	41.4°	48.2°	55.3°	62.9°	67.6°	71.2°	73.7°	75.6°	41.4°	48.2°	55.3°	62.9°	67.6°	71.2°	73.7°	75.6°		
30	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	30	
	27.0°	37.8°	47.6°	57.4°	63.3°	67.6°	70.7°	72.9°	27.0°	37.8°	47.6°	57.4°	63.3°	67.6°	70.7°	72.9°	27.0°	37.8°	47.6°	57.4°	63.3°	67.6°	70.7°	72.9°		
35		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	35	
		23.7°	38.8°	51.5°	58.7°	63.9°	67.6°	70.2°		23.7°	38.8°	51.5°	58.7°	63.9°	67.6°	70.2°		23.7°	38.8°	51.5°	58.7°	63.9°	67.6°	70.2°		
40			11.0	11.0	11.0	11.0	11.0	11.0			11.0	11.0	11.0	11.0	11.0	11.0			9.3	8.7	9.6	10.4	10.9	11.0	40	
			27.7°	45.1°	54.0°	60.1°	64.4°	67.4°			27.7°	45.1°	54.0°	60.1°	64.4°	67.4°			27.7°	45.1°	54.0°	60.1°	64.4°	67.4°		
45			11.0	11.0	11.0	11.0	11.0	11.0			11.0	11.0	11.0	11.0	11.0	11.0				6.4	7.3	8.0	8.5	8.9	45	
			3.1°	37.8°	48.9°	56.1°	61.1°	64.6°			3.1°	37.8°	48.9°	56.1°	61.1°	64.6°				37.8°	48.9°	56.1°	61.1°	64.6°		
50				11.0	11.0	11.0	11.0	11.0				9.8	10.7	11.0	11.0	11.0				4.7	5.6	6.2	6.7	7.1	50	
				29.0°	43.3°	52.0°	57.7°	61.7°				29.0°	43.3°	52.0°	57.7°	61.7°				29.0°	43.3°	52.0°	57.7°	61.7°		
55				11.0	11.0	11.0	11.0	11.0				7.9	8.7	9.4	9.9	10.2				3.3	4.2	4.8	5.3	5.6	55	
				16.0°	37.1°	47.6°	54.2°	58.7°				16.0°	37.1°	47.6°	54.2°	58.7°				16.0°	37.1°	47.6°	54.2°	58.7°		
60					11.0	11.0	11.0	11.0					7.2	7.8	8.3	8.6					3.0	3.7	4.2	4.5	60	
					29.8°	42.8°	50.5°	55.7°					29.8°	42.8°	50.5°	55.7°					29.8°	42.8°	50.5°	55.7°		
65					9.8	9.9	10.0	10.1					5.9	6.5	7.0	7.3					2.1	2.8	3.2	3.5	65	
					20.1°	37.5°	46.6°	52.4°					20.1°	37.5°	46.6°	52.4°					20.1°	37.5°	46.6°	52.4°		
70						8.1	8.2	8.4						5.4	5.9	6.2						2.0	2.4	2.7	70	
						31.5°	42.4°	49.1°						31.5°	42.4°	49.1°						31.5°	42.4°	49.1°		
75						7.3	7.4	7.5						4.5	5.0	5.3						1.3	1.7	2.1	75	
						24.2°	37.8°	45.6°						24.2°	37.8°	45.6°						24.2°	37.8°	45.6°		
80						6.6	6.7	6.9						3.7	4.1	4.5						0.7	1.2	1.5	80	
						13.3°	32.7°	41.8°						13.3°	32.7°	41.8°						13.3°	32.7°	41.8°		
85							6.3	6.4							3.5	3.8							0.7	1.0	85	
							26.7°	37.7°							26.7°	37.7°							26.7°	37.7°		
90							5.6	5.7							2.8	3.2								0.5	90	
							19.1°	33.2°							19.1°	33.2°							NR	33.2°		
95							4.9	5.2							2.3	2.6								NR	95	
							1.5°	28.1°							1.5°	28.1°										
100								4.6								2.1									100	
								21.8°								21.8°										
105								4.0								1.7									105	
								12.9°								12.9°										

\* Capacity based on maximum obtainable boom angle.

° Boom angles are stated in degrees.

NR = No Rating for this position.

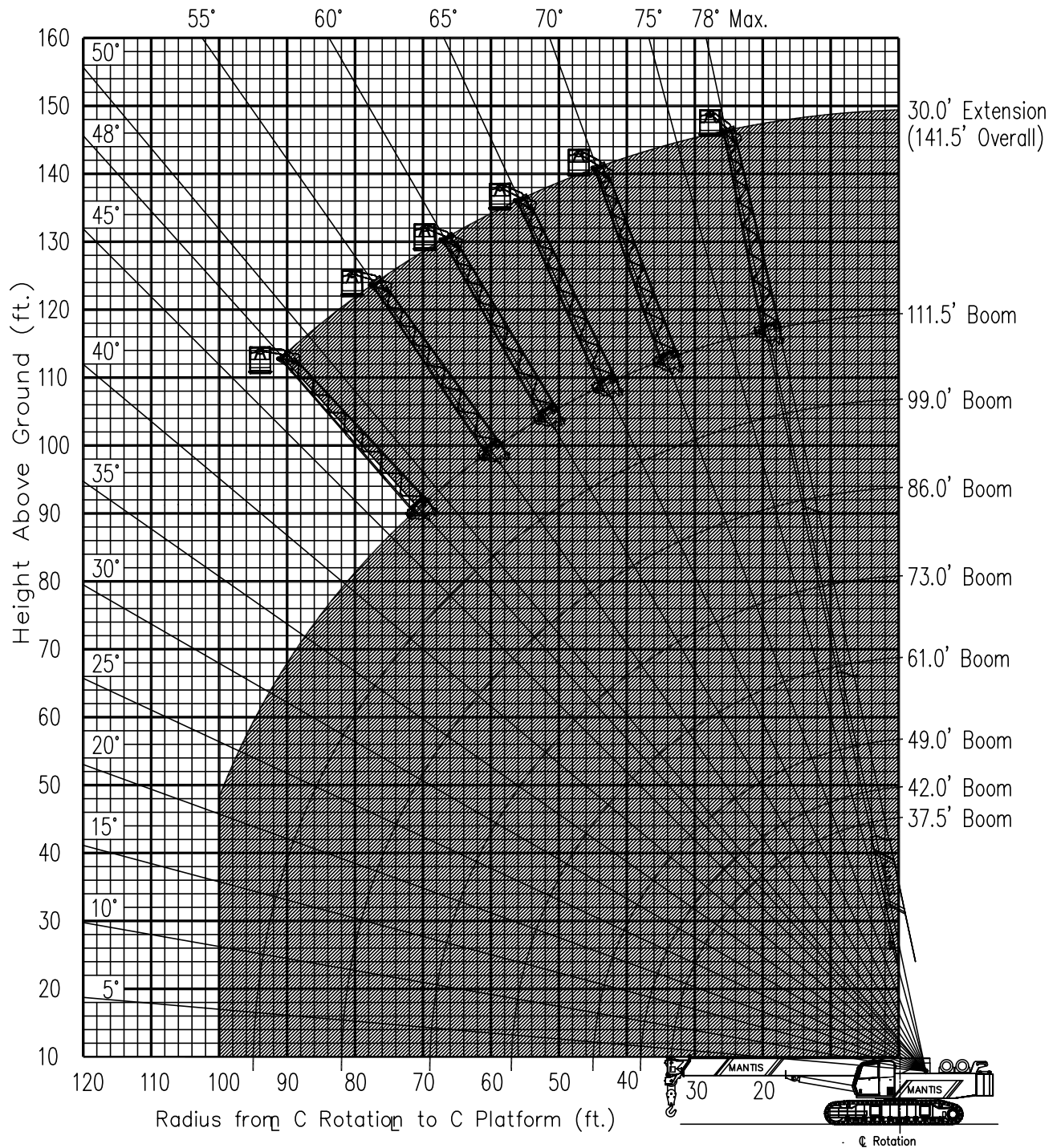


THESE CHART VALUES ARE ONLY A GUIDE AND MUST NOT BE USED TO OPERATE THE CRANE. USE ONLY THE IN CAB LOAD CHARTS AND OPERATOR'S MANUAL FURNISHED WITH THE CRANE.

# LOAD CHARTS

## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE

### MANTIS WP-750 WORK PLATFORM



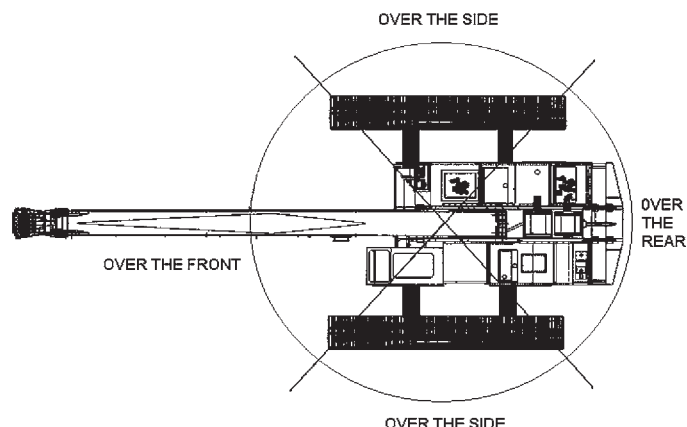
Limits of operation: Maximum load capacity = 750 lb      Maximum radius when mounted on main boom = 100 ft



THESE CHART VALUES ARE ONLY A GUIDE AND MUST NOT BE USED TO OPERATE THE CRANE. USE ONLY THE IN CAB LOAD CHARTS AND OPERATOR'S MANUAL FURNISHED WITH THE CRANE.

# LOAD CHARTS

## MANTIS® 14010 70 TON TELE-BOOM CRAWLER CRANE



MANTIS MODEL 14010				
WIRE ROPE LINE PULL CAPACITIES				
PARTS OF LINE	MAIN WINCH (pounds)	AUX WINCH (pounds)	PARTS OF LINE	MAIN WINCH (pounds)
1	16,800	16,800	6	100,800
2	33,600	33,600	7	117,600
3	50,400	N/A	8	134,400
4	67,200	N/A	9	151,200
5	84,000	N/A	10	168,000
5/8 inch diameter wire rope, 6 x 37 Class, EIP, IWRC				

**PLEASE READ, UNDERSTAND, AND FOLLOW THE MANUALS FURNISHED WITH THE CRANE (OPERATOR'S AND SAFETY) AS WELL AS THE CAPACITY LIMITATIONS AND GENERAL CONDITIONS LISTED BELOW PRIOR TO OPERATION OF THE CRANE. FAILURE TO DO SO MAY RESULT IN AN ACCIDENT.**

### Capacity Limitations and General Conditions:

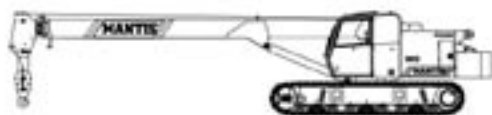
1. This MANTIS CRANE as manufactured, meets the requirements of ANSI B30.5 (2000). Structure and stability have been tested in accordance with SAE J1063 and SAE J765, respectively. Modifications to the crane or use of optional equipment other than specified by the manufacturer can result in a reduction of capacity.
2. The main boom and auxiliary boom head lifting capacities are determined by boom length and load radius. The extension and jib lifting capacities are determined by boom angle.
3. Rated capacity loads given are maximum covered by the manufacturer's warranty and are based on a freely suspended load with NO allowance for factors such as out-of-level operation, supporting surface conditions, hazardous surroundings, experience of personnel, etc. The operator shall establish practical working loads based on prevailing operating conditions, such as, but not limited to the above.
4. All rated capacity loads shown apply to original equipment as supplied by SpanDeck, Inc.
5. All rated capacity loads appearing above the bold line are based on structural strength; tipping should not be relied upon as a capacity limitation.
6. All rated capacity loads appearing below the bold line are based on stability and do not exceed 75% of tipping.
7. Deductions from rated capacities must be made for the weight of the hook block, headache ball, slings, spreader bar, and any other suspended equipment. See Lifting Capacity Deduction Chart for load handling devices supplied by SpanDeck, Inc.
8. A properly calibrated and maintained Load Moment Indicator (LMI) system will indicate boom mounted and other suspended equipment.
9. When making lifts where capacities may be within a zone limited by structural strength, the operator shall determine that the weight of the load is known within plus or minus (+/-) ten percent (10%) before making lift.
10. It is permissible to attempt to telescope boom with a load within the limits of rated capacities. However, boom telescope system hydraulic pressure, and/or boom lubrication may affect operation.
11. Side pull on boom is extremely dangerous and must be avoided.
12. **DO NOT** exceed manufacturers maximum specified reeving.
13. **DO NOT** lift load or extend boom without proper configuration of crane per load chart selected.
14. **DO NOT** attempt to lift any load when wind speed exceeds 20 mph.

Load moment indicating and anti-two block systems are operator aids and must never be used in lieu of job site lift planning calculations by the operator which must take into account ground conditions, weather and all other environmental factors prevailing at the time of the lift. Prices and specifications are subject to change at any time without prior notice and are for factory installation at the time of original manufacture. F.O.B Plant; Richlands, VA 24641. Illustrations and photographs may show optional equipment. Supercedes all previous issues. Please see [www.mantiscranes.com](http://www.mantiscranes.com) for most current information.



THESE CHART VALUES ARE ONLY A GUIDE AND MUST NOT BE USED TO OPERATE THE CRANE. USE ONLY THE IN CAB LOAD CHARTS AND OPERATOR'S MANUAL FURNISHED WITH THE CRANE.

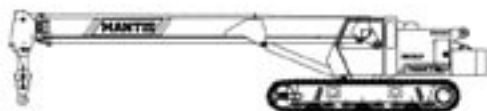
# MANTIS® PRODUCT LINE



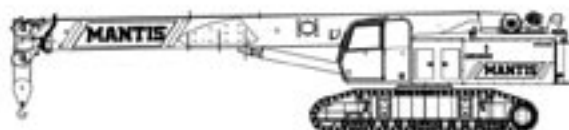
**3612 - 18 US TON CRAWLER**



**9010 - 45 US TON CRAWLER**



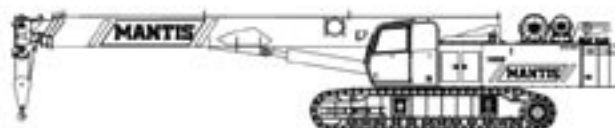
**3612LP - 18 US TON CRAWLER**



**10010Mx - 50 US TON CRAWLER**



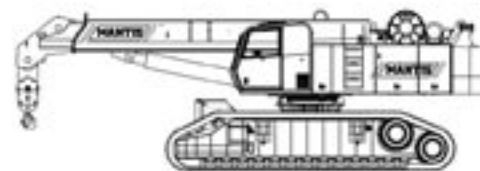
**6010 - 30 US TON CRAWLER**



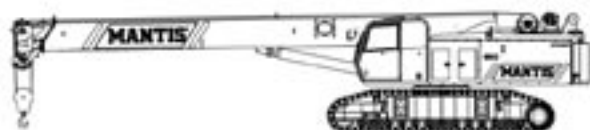
**14010 - 70 US TON CRAWLER**



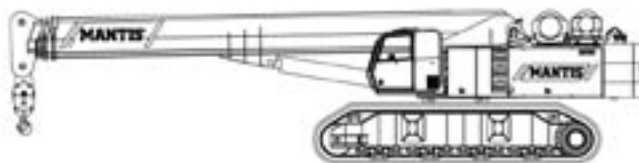
**6010LP - 30 US TON CRAWLER**



**200RS - 100 US TON CRAWLER**



**8012 - 40 US TON CRAWLER**



**20010 - 100 US TON CRAWLER**

## MANTIS CRANES

Mfg. by SpanDeck, Inc.

129 CONFEDERATE DRIVE • FRANKLIN, TN 37064 USA

PHONE: 800-272-3325 • FAX: 615-790-6803

[sales@mantiscranes.com](mailto:sales@mantiscranes.com) • [www.mantiscranes.com](http://www.mantiscranes.com)

