



# MANTIS 8012

## 40 Ton Tele-Boom Crawler Crane

### PRODUCT DESCRIPTION

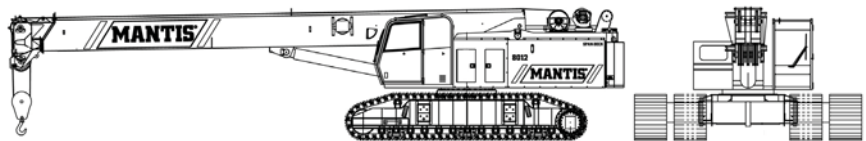
With 10-plus year's worldwide service behind it, the Mantis 8012 is one of the most performance-proven telescopic boom crawler cranes available. Rated at 40-ton (36-tonne) lifting capacity at a generous 12ft (3.66m) radius, the Mantis 8012 is conservatively-rated, super heavy-duty crane that contractors depend upon for critical and challenging assignments. And like all Mantis cranes, the 8012 can pick-and-carry its entire load chart – through 360°.

For its size and power, the 8012 has an extraordinarily low center of gravity and a small counterweight that represents only 11-12% of working weight. This combination facilitates tremendous stability, especially when operating on steep inclines. The 8012 can walk with full boom and jib deployed, or with full nominal capacity suspended. It can even walk with 35-tons (31.8-tonnes) suspended when equipped with zero counterweight or with tracks retracted providing lower ground bearing pressure or narrower widths when needed.



MAIN BOOM with 10,000 lb COUNTERWEIGHT			
MAIN BOOM LENGTH (ft)			
RADIUS (ft)	39.0	39.1 to	RADIUS (ft)
10	70.0	40.0	10
12	50.0	36.0	12
14	39.0	33.0	14
16	31.5	31.5	16
18	26.0	26.0	18
20	22.0	22.0	20
22	19.0	19.0	22
24	16.5	16.5	24
26	14.4	14.4	26
28	12.7	12.7	28
30	11.2	11.2	30
32	10.1	10.1	32
34	9.1	9.1	34
36	8.4	8.4	36
38	7.6	7.6	38
40	6.9	6.9	40
42	6.3	6.3	42
44	5.9	5.9	44
46	5.4	5.4	46
48	4.9	4.9	48
50	4.5	4.5	50
52	4.2	4.2	52
54	3.8	3.8	54
56	3.5	3.5	56
58	3.2	3.2	58
60	2.9	2.9	60
60	2.3	2.3	60

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



### BOOM

The boom consists of three full power sections, 39 ft (11.89 m) retracted and 90 ft (27.43 m) fully extended. Maximum tip height is 96 ft (29.26 m). The elevating system features a single cylinder and counterbalance lock valves which provides boom elevations from -1° to 78°. The telescoping system features a single double-acting hydraulic cylinder and counterbalance lock valves. Five 15 in (381 mm) diameter cast nylon sheaves on heavy-duty roller bearings are mounted in the boom head.

### ANTI-TWO BLOCK

Standard Rated Capacity Limiter and Anti-Two Block System includes audio and video warnings 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 track configuration, relative load moment, maximum permissible load and actual load. The standard Work Area Definition audio and video warnings aid the operator in avoiding job-site obstructions by pre-setting and defining the work area. The anti-two block weight allows quick reeving of hook blocks.

### 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.



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Effective Date

8/17/08



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## 40 Ton Tele-Boom Crawler Crane

WEIGHT REDUCTIONS	
LOAD HANDLING DEVICES	
HOOKBLOCK: 40 Ton - 4 Sheave	1200 lbs
OVERHAUL BALL: 12 Ton w/Swivel	220 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.



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.

### CONTROL

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

### COUNTERWEIGHT

The single piece 10,000 lb (4,536 kg) counterweight can be removed and installed via a pendant attached to the boom.

### FUEL SYSTEM

An 80 US gal (303 liter) 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 4,850psi (339.5 kg/cm<sup>2</sup>). An extra circuit is included for ready adaptation tohydraulic accessories.

The system includes two pilot operated valve banks that are pressure and flow compensated. The 300 US gal (1,136 liter) 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.



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