



MANTIS 10010MX

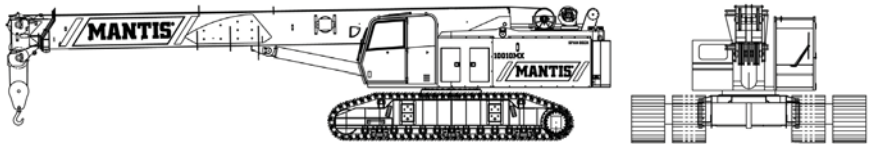
50 Ton Tele-Boom Crawler Crane

PRODUCT DESCRIPTION

Job-proven for more than 5-years on some of the most demanding projects, the Mantis 10010Mx has established itself as the benchmark for 50-ton (45-tonne) capacity telescopic boom crawler cranes - worldwide. Rated at 50-ton (45-tonne) lifting capacity at a full 10ft (3m) radius, the Mantis 10010Mx can pick-and-carry its entire load chart through a full 360°. Extending the performance potential of the 10010Mx is a long 111ft 6ins (34m) four-section full power telescopic boom. Such is the extraordinary stability of the 10010Mx that, with tracks extended, the crane can still make lifts with the main boom fully telescoped and laid-out horizontally.

Lifting at height the 10010Mx also shows its strength with 35,000lbs at 25ft radius (or 15.3-tonnes @ 8m) on the fully elevated and telescoped main boom. For increased height the 10010Mx 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 11-12ft (3.35-3.66m) overall width, the 10010Mx can still walk with 42,600lbs (19.3-tonnes) on a fully telescoped 111ft 6ins (34m) main boom and swing it through 360°.

For its size and power, the Mantis 10010Mx has an extraordinarily low center of gravity with an overhead clearance height of just 10ft (3.05m). And like all Mantis cranes, the 10010Mx doesn't depend upon massive counterweighting for its strength, for big counterweights are a liability when climbing grades.



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). 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°. Seven 19 in (483 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 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.



MAIN BOOM with TRACKS FULLY EXTENDED									
20,000 lb COUNTERWEIGHT									
RADIUS (ft)	MAIN BOOM LENGTH (ft)							RADIUS (ft)	
	37.5	42.0	48.0	61.0	73.0	86.0	99.0		111.5
10	100.0 70.1*	90.0 72.3*	86.0 74.9*	79.0* 78.0*					10
12	82.5 66.8*	80.0 69.4*	76.0 72.5*	72.0* 76.0*					12
15	66.0 61.6*	64.0 64.9*	61.0 68.7*	59.5 73.1*	48.0 75.9*	44.0* 78.1*			15
20	53.2 52.2*	51.1 57.0*	49.1 62.2*	51.4 68.1*	43.0 71.8*	40.0 74.7*	38.0* 76.7*		20
25	39.6 41.4*	38.7 48.2*	37.3 55.3*	38.0 62.9*	38.6 67.6*	39.0 71.2*	36.0 73.7*	35.0* 75.6*	25
30	29.5 27.0*	29.0 37.8*	28.7 47.6*	28.5 57.4*	29.2 63.3*	29.9 67.6*	30.2 70.7*	30.5 72.9*	30
35		22.3 23.7*	22.0 38.8*	21.8 51.5*	22.5 58.7*	23.3 63.9*	23.7 67.6*	24.1 70.2*	35
40			16.8 27.7*	16.6 45.1*	17.3 54.0*	17.9 60.1*	18.6 64.4*	19.1 67.4*	40
45			12.8 3.1*	13.2 37.8*	13.7 48.9*	14.3 56.1*	15.0 61.1*	15.5 64.6*	45
50				10.5 29.0*	11.1 43.3*	11.7 52.0*	12.4 57.7*	13.0 61.7*	50
55				8.4 16.0*	8.9 37.1*	9.7 47.6*	10.4 54.2*	10.8 58.7*	55
60					8.0 29.8*	8.4 42.8*	8.7 50.5*	9.0 55.7*	60
65					6.7 20.1*	7.0 37.5*	7.3 46.6*	7.6 52.4*	65
70					5.7 31.5*	6.0 42.4*	6.3 49.1*		70
75					4.6 24.2*	5.0 37.8*	5.3 45.6*		75
80					3.7 13.3*	4.1 32.7*	4.4 41.8*		80
85						3.2 26.7*	3.6 37.7*		85
90						2.7 19.1*	3.0 33.2*		90
95						2.1 1.5*	2.4 28.1*		95
100							1.9 21.8*		100
105							1.1 12.9*		105



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Effective Date
8/17/08



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50 Ton Tele-Boom Crawler Crane



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.

CONTROL

Two-way hydraulic joysticks mounted in the operator's seat armrests control swing, auxiliary hoist, main winch and boom hoist. Four twoway hydraulic foot pedals control travel, swing service brake and boom telescoping functions. A fifth pedal controls engine speed.

COUNTERWEIGHT

The one piece 20,000 lb (9,070 kg) counterweight can be removed and installed via a pendant attached to the boom.

FUEL SYSTEM

An 80 US gal (303 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/cm²). 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.



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