



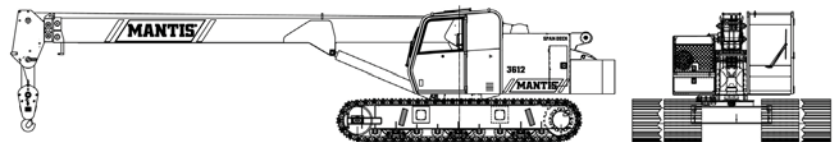
MANTIS 3612

18 Ton Tele-Boom Crawler Crane

PRODUCT DESCRIPTION

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.



MAIN BOOM with TRACKS FULLY RETRACTED 10,000 lb COUNTERWEIGHT					
RADIUS (ft)	MAIN BOOM LENGTH (ft)				RADIUS (ft)
	29.2	39.6	50.0	60.6	
10	36.0	36.0			10
	68.3°	74.2°			
12	36.0	36.0	36.0	36.0	12
	64.0°	71.2°	75.2°	77.9°	
14	19.5	19.5	19.5	19.5	14
	59.5°	68.1°	72.8°	75.9°	
16	13.8	13.8	13.8	13.8	16
	54.8°	64.9°	70.4°	74.0°	
18	11.4	11.4	11.4	11.4	18
	22.3°	47.3°	57.6°	63.8°	
20	9.6	9.6	9.6	9.6	20
	44.3°	58.3°	65.4°	70.0°	
22	8.3	8.3	8.3	8.3	22
	38.3°	54.8°	62.9°	67.9°	
24	7.1	7.1	7.1	7.1	24
	31.3°	51.1°	60.3°	65.9°	
26	6.2	6.2	6.2	6.2	26
	22.3°	47.3°	57.6°	63.8°	
28	5.4	5.4	5.4	5.4	28
	3.9°	43.2°	54.8°	61.7°	
30		4.8	4.8	4.8	30
		38.7°	51.9°	59.5°	
32		4.1	4.1	4.1	32
		33.7°	48.9°	57.2°	
34		3.6	3.6	3.6	34
		28.0°	45.8°	55.0°	
36		3.1	3.1	3.1	36
		20.8°	42.5°	52.6°	
38		2.7	2.7	2.7	38
		9.3°	38.9°	50.2°	
40			2.4	2.4	40
			35.1°	47.7°	
42			2.0	2.0	42
			30.8°	45.0°	

BOOM

The main boom consists of three fully powered sections. Retracted length is 29 ft 5 in (8.97 m) and extended length is 71 ft 4 in (21.67 m). Maximum tip height is 76 ft 3 in (23.24 m). The elevating system features two cylinders and counterbalance lock valves which provide boom elevations from -1° to 78°. The telescoping system features a single double-acting hydraulic cylinder and counterbalance lock valves preventing the cylinder from retracting under load. Four 12 in (305 mm) diameter steel 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 audible and visual warnings and function shutdown. The 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 (operator set), 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 and sends an audible alarm of imminent two-block conditions.

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

SWING

The superstructure rotates 360° on an external gear shear ball slew bearing bolted to the superstructure and the carbody. The hydraulic swing drive powers the system and consists of a gear motor driving a planetary gear 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 brake which includes a foot applied service brake. Alternatively, 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 55 US gal (208 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 torque limiting and pressure compensated providing a maximum output of 115 gpm (437 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 150 US gal (568 liter) capacity hydraulic oil reservoir has a spin-on filler-breather cap, external sight gauge, cleanout access and a sump type drain. 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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