

Bid Specifications – Telescopic Service Crane

12,000 lb. Maximum Lifting Capacity
85,000 ft.-lb. Maximum Moment



Compliance to Specifications The Bidder shall indicate their compliance by checking "Yes" or "No" for each item specified. Any space not checked shall be interpreted as non-compliance and will result in disqualification of the bid.

Make & Model	<u>HC-12 NexStar</u>	Comply to Specification		Deviation from Specification
		Yes	No	
Capacity (Measured from Center of Rotation) (See full load and stability charts attached for reference)	12,000 lb. @ 3 ft.			
	12,000 lb. @ 6 ft.			
	9,248 lb. @ 9 ft.			
	7,553 lb. @ 11 ft.			
	6,770 lb. @ 12 ft. 6 in.			
	4,850 lb. @ 15 ft. 4 in.			
	3,998 lb. @ 19 ft.			
	3,454 lb. @ 21 ft.			
	2,748 lb. @ 25 ft.			
2,454 lb. @ 30 ft.				
Specifications & Standards	Overall dimensions (L x W x H) 190.87 in. x 25.125 in. x 37.5 in.			
	Weight of crane shall not exceed 3,055 lb.			
	Minimum truck chassis of: <ul style="list-style-type: none"> • 29,000 lb. GVWR • 1,000,000 in.-lb. RBM 			
	Paint – Auto Crane White			
	Compliance with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck cranes (OSHA Title 29, Part 1910.180)			
Boom – Lift	Hydraulically actuated power extend and power retract			
	Lift angle from -12° to 75°			
	Lift cylinder: <ul style="list-style-type: none"> • Single stage, Double acting for smooth boom operation 			

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Load Sensing	<ul style="list-style-type: none"> Counterbalance valve incorporated preventing unintentional boom dropping in the event of a hose failure 			
	<ul style="list-style-type: none"> Pressure transducer sensing coupled with 3-axis true boom angle measurement relative to crane mounting surface and 3-axis true crane base attitude monitoring (truck level). Automatic 50% reduction of rotation speed while under load (slow rotate) In Overload condition, disable <u>only</u> hoist up, boom extend and boom down functions. Other functions shall remain operable 			
		<ul style="list-style-type: none"> In Low Boom Pressure condition, disable <u>only</u> boom down, swing CW and CCW, boom retract and extend, hoist up. Other functions remain operable (Anti-Bridging) 		
Extension	Hydraulically actuated by means of extension cylinder from 13 ft. 6 in. to 30 ft. 6 in.			
	Extension cylinder: <ul style="list-style-type: none"> Trunnion mounted inside boom to protect from external damage Double acting for smooth operation Incorporates counterbalance valve to prevent unintentional boom retraction in the event of a hose failure 			
Hoist	<ul style="list-style-type: none"> Hydraulic motor driven, planetary gear reduction with a load holding brake 			
	<ul style="list-style-type: none"> 6,000 lb. last layer capacity 			
	<ul style="list-style-type: none"> 55 ft./min. (single line) with no load 			
	<ul style="list-style-type: none"> 120-ft. of .4375 in. diameter aircraft cable with 21,000 lb. breaking strength compliance to ANSI Standards 			
Sheave	Anti-friction, high strength polymer with maintenance free, sealed needle bearings			
Anti-two-block Preventer	A bail type to reduce crown to hook distance. (Hanging block two-block sensor is not acceptable.)			
	When activated, shall disable hoist up, boom down and extend out functions			

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	Located on the left side of the boom to protect it from tree limbs, etc. while traveling			
	Cable shall be contained in a high impact plastic case with a spring loaded cable reel			
Swivel Block	<ul style="list-style-type: none"> • Heavy-duty type with hook with latch 			
	<ul style="list-style-type: none"> • Provision for double line string up 			
Rotation	Hydraulically actuated			
	450° non-continuous rotation self-locking worm gear drive to hold crane position			
	Two speeds (automatically switched under load)			
	Sealed planetary drive			
Hydraulic System	Main valve – Mono-block type with individual cartridge valves for the crane functions for easy accessibility and serviceability			
	<ul style="list-style-type: none"> • 10 GPM @ 2,750 PSI 			
	<ul style="list-style-type: none"> • Proportional Boom Up/Down • Proportional Rotation 			
	<ul style="list-style-type: none"> • Proportional Boom Ext/Ret. 			
	<ul style="list-style-type: none"> • Proportional Hoist Up/Down 			
	<ul style="list-style-type: none"> • Manual Override on all functions 			
Control System	Remote Control – FM Radio & Tethered Options:			
	<ul style="list-style-type: none"> • Handheld remote control designed for one hand operation of crane functions. 			
	<ul style="list-style-type: none"> • 2 joystick / 1 trigger configuration 			
	<ul style="list-style-type: none"> • IP67 and CE certified remote 			
	<ul style="list-style-type: none"> • 100% fully independent proportional function joystick or trigger control 			
	<ul style="list-style-type: none"> • Integrated E-Stop button on remote 			
	<ul style="list-style-type: none"> • Four distinct transmitter signal output settings to maximize control resolution for creep operation 			
	<ul style="list-style-type: none"> • Transmitter shall have a color LCD readout providing the operator with feedback to allow explanation of current operating status 			
	<ul style="list-style-type: none"> • Dock for remote charging and storage included 			
	<ul style="list-style-type: none"> • Alkaline battery (AA x 3) backup included 			

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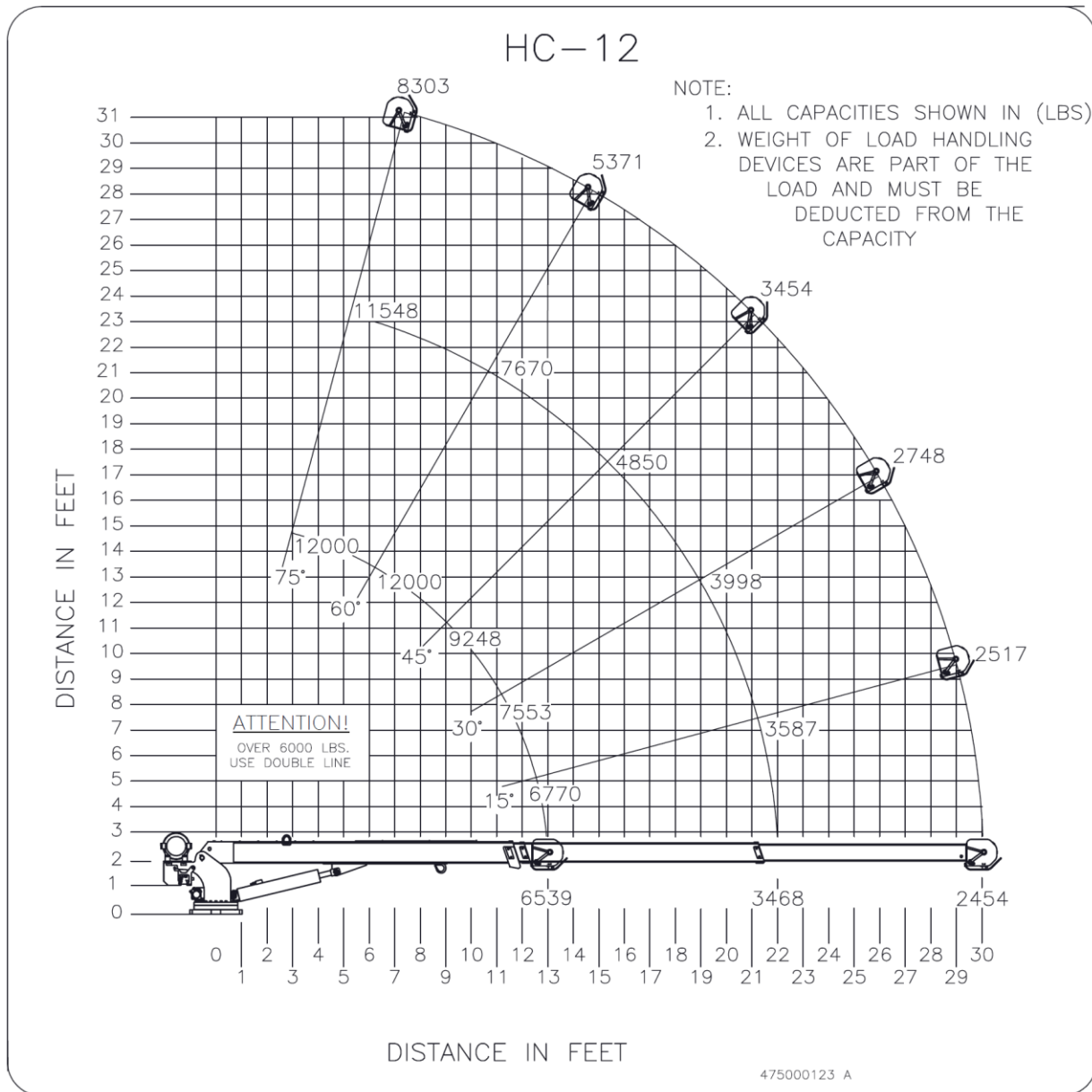


Figure 1: HC-12 Load Chart