

Bid Specifications – Telescopic Service Crane

4,000 lb. Maximum Lifting Capacity
16,000 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	EHC-4 NexStar 16' Boom	Comply to Specification		Deviation from Specification
		Yes	No	
Capacity (Measured from Center of Rotation) (See full load and stability charts attached for reference)	4,000 lb. @ 4 ft.			
	2,666 lb. @ 6 ft.			
	2,000 lb. @ 8 ft.			
	1,600 lb. @ 10 ft.			
	1,333 lb. @ 12 ft.			
	1,143 lb. @ 14 ft.			
	1,000 lb. @ 16 ft.			
Specifications & Standards	Overall dimensions (L x W x H) 116 in. x 20.63 in. x 24 in.			
	Weight of crane shall not exceed 960 lb.			
	Minimum truck chassis of:			
	10,500 lb. GVWR 210,600 in.-lb. RBM			
	Paint – Auto Crane White			
DC Power Unit	Compliance with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck cranes (OSHA Title 29, Part 1910.180)			
	Electro-hydraulic system consists of an electric motor driving hydraulic pump which Provides fluid power to:			
	Boom Lift / Lower			
	Boom Extension / Retraction			
	Rotation			
	Hoist Up / Down			
	Electric motor – 12V DC series wound			
	Hydraulic: Gear pump, .065 cu. in./rev. displacement			

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	2.4 gallon nominal-capacity reservoir			
	System:			
	- Set full by-pass relief @ 3,000 PSI - Output: 1.0 GPM minimum @ 2,750 PSI @ 239 amps max.			

Boom – Lift	Hydraulically actuated			
	Lift angle from -3° to 75°			
	Lift cylinder:			
	- Double acting for smooth boom operation - Counterbalance valve incorporated preventing unintentional boom dropping in the event of a hose failure			
	Load Sensing			
	- 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			
	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 8 ft. to 12 ft. and manually actuated from 12 ft. to 16 ft.			
	Extension cylinder:			
	- 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			
	4 ft. manual extension			
	Total 16 ft. extension			

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Hoist	Hydraulically motor-driven planetary gear reduction with a load holding brake			
	Rated @ 2,000 lb. last layer capacity			
	Line speed of 20 ft./min. (single line) with no load			
	80-ft. of .3125 in. diameter aircraft cable with 9,800 lb. breaking strength compliance to ANSI Standards			

Sheave	Anti-friction, high strength polymer with maintenance free, sealed needle bearings			
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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			
	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	Heavy-duty type with hook with latch			
	Provision for double line string up			

Rotation	370° rotation range			
	40:1 worm gear set			
	Provision for adjusting backlash between worm & gear			
	(Non-adjustable gear set is NOT acceptable.)			
	Turntable style slew bearings			
	Cycle speed – 38 sec. no load			

Hydraulic System	Main valve – Mono-block type with individual cartridge valves for the crane functions for easy accessibility and serviceability			
	Proportional Boom Up/Down			
	Proportional Hoist Up/Down			
	Proportional Rotation			
	Non-Proportional Boom Ext/Ret.			
	Manual Override on all functions			

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Control System	Remote Control – FM Radio with Tether Cable			
	Handheld remote control designed for one hand operation of crane functions.			
	2 joystick / 1 trigger configuration			
	IP67 and CE certified remote			
	100% fully independent proportional function joystick or trigger control			
	Integrated E-Stop button on remote			
	Four distinct transmitter signal output settings to maximize control resolution for creep operation			
	Transmitter shall have a color LCD readout providing the operator with feedback to allow explanation of current operating status			
	Dock for remote charging and storage included			
	Alkaline battery (AA x 3) backup included			
	Remote Control – FM Radio:			
	Operates on a rechargeable, internal, lithium-ion battery			
	Has an estimated 300 foot operating range			
	Remote Control – Tethered:			
	32 ft. communication cable included - When tethered, remote is directly connected to crane and no FM signals are sent/received			
	Receiver – FM Radio and tethered Remote			
	- Crane mounted and features - IP65 rated			

Warranty	Manufacturer shall provide a two-year limited warranty against defects in materials and workmanship from the date of delivery			
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Options (Must be available as required)	Paint – provide code and desired color if other than standard			
	Boom Support shall be installed for the boom in a stowed position while in transit			
	Outriggers: Shall be installed to increase stability and reduce the load on the truck springs while lifting			

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	Oil Temperature Sensor to monitor crane hydraulic oil temperatures			
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Notes:	

Submitted by: _____

Date: _____

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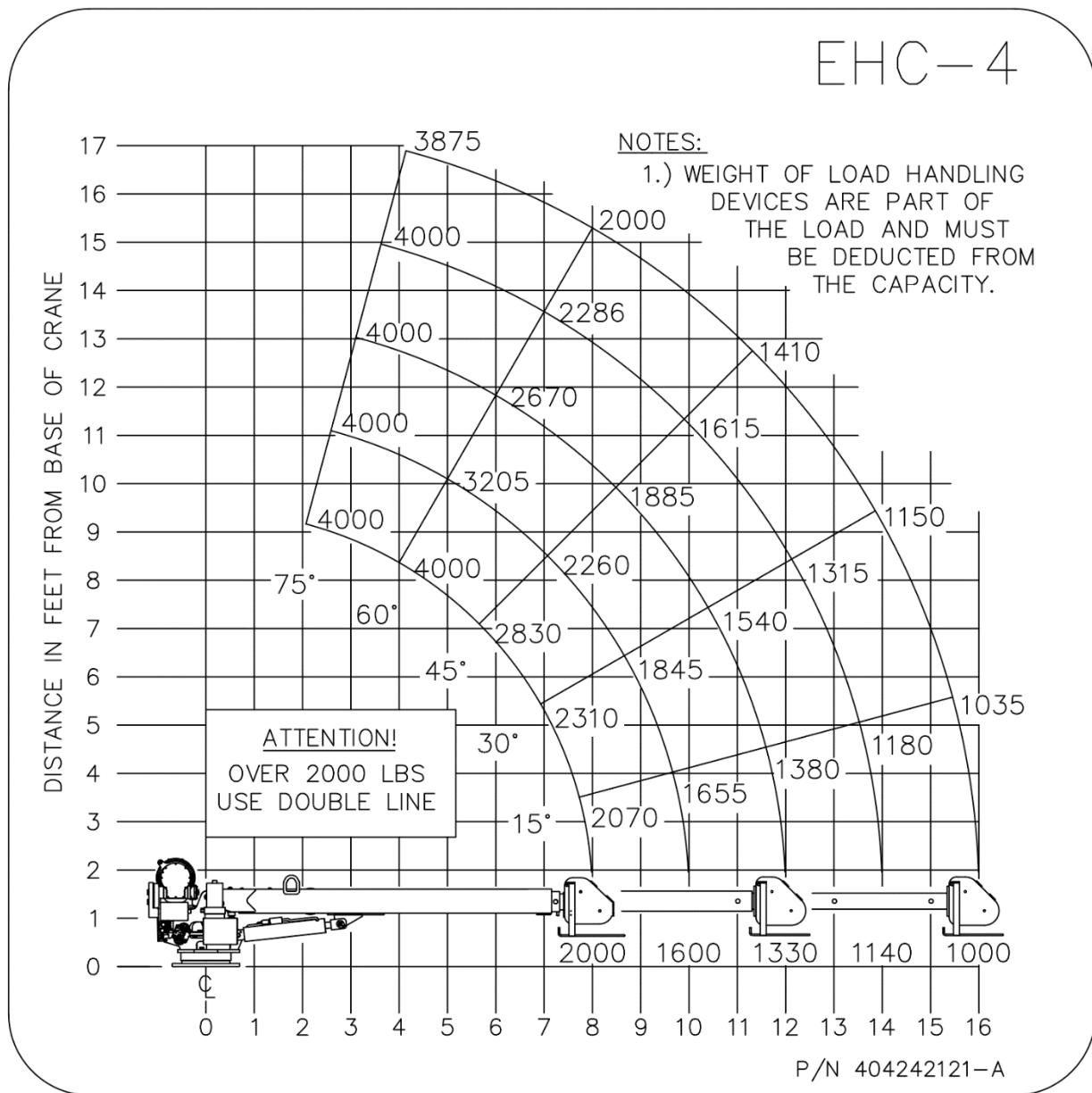


Figure 1: EHC-4, 16' Boom Load Chart