

# Bid Specifications – Telescopic Service Crane

**8,400 lb. Maximum Lifting Capacity**  
**50,000 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>8406H NexStar</u>	<b>Comply to Specification</b>		<b>Deviation from Specification</b>
		Yes	No	
<b>Capacity</b> (Measured from Center of Rotation)  (See full load and stability charts attached for reference)	8,400 lb. @ 6 ft.			
	6,250 lb. @ 8 ft.			
	5,000 lb. @ 10 ft.			
	4,167 lb. @ 12 ft.			
	3,571 lb. @ 14 ft.			
	3,125 lb. @ 16 ft.			
	2,778 lb. @ 18 ft.			
	2,500 lb. @ 20 ft.			
<b>Specifications &amp; Standards</b>	<b>Overall dimensions</b> (L x W x H) 156 in. x 23.06 in. x 33.56 in.			
	<b>Weight</b> of crane shall not exceed 1,755 lb.			
	Minimum <b>truck chassis</b> of: <ul style="list-style-type: none"> <li>• 20,500 lb. GVWR</li> <li>• 510,000 in.-lb. RBM</li> </ul>			
	<b>Paint</b> – Auto Crane White			
	<b>Compliance</b> with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck cranes (OSHA Title 29, Part 1910.180)			
<b>Boom – Lift</b>	Hydraulically actuated power extend and power retract			
	<b>Lift angle</b> from -12° to 75°			
	<b>Lift cylinder:</b> <ul style="list-style-type: none"> <li>• Single stage, Double acting for smooth boom operation</li> <li>• Counterbalance valve incorporated preventing unintentional boom dropping in the event of a hose failure</li> </ul>			

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<b>Load Sensing</b>	<ul style="list-style-type: none"> <li>• 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).</li> <li>• Automatic 50% reduction of rotation speed while under load (slow rotate)</li> <li>• In Overload condition, disable <u>only</u> hoist up, boom extend and boom down functions. Other functions shall remain operable</li> </ul>			
	<ul style="list-style-type: none"> <li>• 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)</li> </ul>			
<b>Extension</b>	Hydraulically actuated by means of extension cylinder from 10 ft. 6 in. to 20 ft. 6 in.			
	<b>Extension cylinder:</b> <ul style="list-style-type: none"> <li>• Trunnion mounted inside boom to protect from external damage</li> <li>• Double acting for smooth operation</li> <li>• Incorporates counterbalance valve to prevent unintentional boom retraction in the event of a hose failure</li> </ul>			
<b>Hoist</b>	<ul style="list-style-type: none"> <li>• Hydraulic motor driven, planetary gear reduction with a load holding brake</li> </ul>			
	<ul style="list-style-type: none"> <li>• 4,200 lb. last layer capacity</li> </ul>			
	<ul style="list-style-type: none"> <li>• 55 ft./min. (single line) with no load</li> </ul>			
	<ul style="list-style-type: none"> <li>• 95-ft. of .375 in. diameter aircraft cable with 14,700 lb. <b>breaking strength</b> compliance to ANSI Standards</li> </ul>			
<b>Sheave</b>	Anti-friction, high strength polymer with maintenance free, sealed needle bearings			
<b>Anti-two-block Preventer</b>	A bail type to reduce crown to hook distance. (Hanging block two-block sensor is <b>not</b> 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			

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

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	<ul style="list-style-type: none"> <li>Operates on a rechargeable, internal, lithium-ion battery</li> <li>Has an estimated 300 foot operating range</li> </ul>			
	<b>Remote Control – Tethered:</b> <ul style="list-style-type: none"> <li>32 ft. communication cable included</li> </ul>			
	<b>Receiver – FM Radio and tethered Remote</b> <ul style="list-style-type: none"> <li>Crane mounted and features</li> <li>IP65 rated</li> </ul>			
	<b>See Options Section below for additional control configurations.</b>			

<b>Warranty</b>	Manufacturer shall provide a <b>two-year limited warranty</b> against defects in materials and workmanship from the date of delivery			
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<b>Options</b> (Must be available as required)	<b>Paint</b> – provide code and desired color if other than standard			
	<b>Boom Support</b> shall be installed for the boom in a stowed position while in transit			
	<b>Outriggers:</b> <ul style="list-style-type: none"> <li>Shall be installed to increase stability and reduce the load on the truck springs while lifting</li> </ul>			
	<b>Oil Temperature Sensor</b> to monitor crane hydraulic oil temperatures			

**Notes:**

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**Submitted by:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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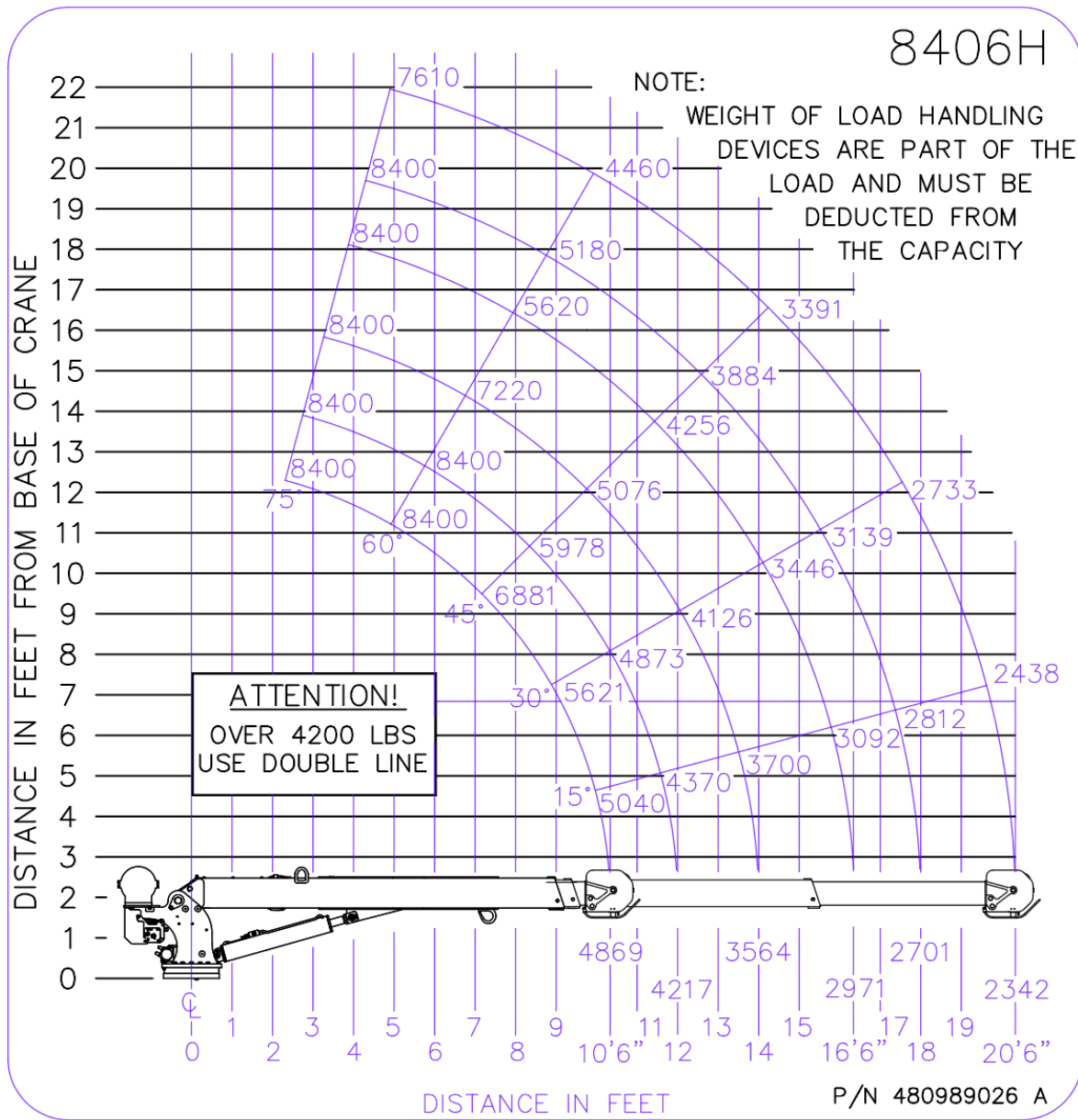


Figure 1: 8406H Load Chart