

Life Cycle Cost Comparison: Seatrax SB Series Utility Cranes vs. Conventional Box Boom Cranes

Conventional Box Boom	Cons	Seatrax SB Crane	Pros
<p>“Braden”- type, “works in the drum” winches</p>	<ul style="list-style-type: none"> • Small load hoists (usually in the 450 to 500 lbs. weight range) using a minimum of four or six parts of line required to lift rated loads • Heavy lifts made at very slow speeds • Do not have band brakes, so periodic internal inspections or replacement required • Periodic internal inspections or replacements required to maintain personnel lifting rating • Gears and brakes in drum, difficult to service • Not serviceable with wire rope in place • Gear failure can result in loss of load 	<p>Seatrax API Spec 2C drilling duty, spring applied, contracting band brake hoists</p>	<ul style="list-style-type: none"> • Heavy duty load hoists (usually in the 4500-6000 lbs. weight range) with single-part heavy lift capacities • Designed for the life of platform duty cranes • API Spec 2C rated for personnel lifting • Heavy lifts made at safer, quicker speeds • No periodic internal inspections or replacement required • No periodic internal inspections or replacements required to maintain personnel lifting rating • Serviceable with wire rope in place. Gears, brakes and hydraulics located external to the drum. • Band brake functional in the event of gear failure



Typical Crane	Cons	Seatrax SB Crane	Pros
Rotation ball bearing and mounting bolts	<ul style="list-style-type: none"> Bearing or bolt failure can cause crane to topple off the side of the platform Replacement requires dismounting of crane and is very costly Tight flatness and true position tolerances required on pedestal 	Uses a kingpost in lieu of a rotation ball bearing	<ul style="list-style-type: none"> No rotation ball bearing or ball bearing mounting bolts, inherently impossible for crane to topple off the kingpost Kingpost bearings easily and economically replaced with crane in place with common tools Kingpost welds directly to host structure, no machining for ball ring or bolt holes

Typical Crane	Cons	Seatrax SB Crane	Pros
Anti-two-blocking gadgets	<ul style="list-style-type: none"> Load hoists located in the upperworks of the crane, so boom lowering can cut the load line Valves, switches or gadgets required to prevent two-blocking Valve or switch failure may lead to loss of load 	API Specification 2C Mechanical anti-two-blocking	<ul style="list-style-type: none"> Main and auxiliary draw works located on the boom, lowering cannot cause two-blocking Load hoist located on the boom, lowering cannot cause two-blocking Fully mechanical, no valves, switches or gadgets Boom tip can mechanically withstand full line pull capacity of the load hoist

Typical Crane	Cons	Seatrax SB Crane	Pros
<p>Hydraulic cylinder used to luff the boom</p>	<ul style="list-style-type: none"> • Poor structural capacities for lifts at maximum radii, especially with long boom cranes • Limited operational boom angles • Cylinder rod prone to corrode in the marine environment • Cylinder rod corrosion rapidly causes cylinder rod seal leakage • Cannot be lowered for easy access to boom tip sheaves • Erratic or jerky luffing motion inherent with the cylinder luffed configuration 	<p>Cable- suspended boom</p>	<ul style="list-style-type: none"> • Enhanced structural capacities at maximum operating radii, especially with long boom cranes • Operational boom angles range from 85° to -10° (crane can luff to 10° below horizontal) • No cylinder is used, no cylinder rod to corrode, no rod seal to leak • Galvanized wire rope and Nylatron sheaves used for corrosion resistance • Crane boom can be lowered to 10° below horizontal for easy access to the boom tip sheaves • Smooth and consistent luffing characteristics

Typical Crane	Cons	Seatrax SB Crane	Pros
<p>Small diameter and long lengths of wire rope</p>	<ul style="list-style-type: none"> • The small winches found on typical cranes require long length, small wire rope diameters for many parts of line • Large number of parts of line limit hook drops and slow the hook speeds • Non-galvanized wire rope is often used 	<p>Large diameter and short lengths of wire rope</p>	<ul style="list-style-type: none"> • Big hoists, shorter lines of larger, stronger and longer lasting cable • Galvanized wire rope is used for corrosion resistance • Fewer parts of line allowing longer hook drops and faster heavy lifts