

# HC-278H II

## HYLAB Series

### Lattice Boom Truck Crane 300-ton (272 mt)

- 300 tons (272 mt) at a 10' (3.05 m) radius
- 60' to 330' (18.29 - 100.58 m) of tube boom
- 300' + 100' (91.4 + 30.5 m) boom plus jib combination
- 403.8' (123.1 m) maximum tip height and 340' (95.70 m) maximum 360° working radius
- Increased strength chart with two stage boom:
  - 1st stage: first 190' (57.91 m) JE boom (LS-278)
  - 2nd stage: 200' - 330' (60.96 - 100.58 m) HJ boom (original HC-278H)
- 42.5 ton (38.6 mt) capacity, 477' (145.39 m) maximum luffing boom working height and 263' (80.16 m) maximum 360° working radius - common to LS-278H luffer
- New five piece upper counterweight - total 108,200 lbs. (49 080 kg)
- 50,103 lbs. (22 727 kg) maximum line pull
- 550 fpm (168 mpm) maximum line speed

**Link-Belt**





# Unmatched Large Crane Transport with Dependable Hydraulic Control and Proven Lattice

**The HC-278H II HYLAB** lift crane features unmatched load control, capacities, and transportability. This Hydraulic Lattice Boom (HYLAB) truck crane also features pilot operated hydraulic controls that have been setting industry standards for over 50 years. The basic HYLAB hydraulic system has been proven in over 2,000 cranes currently working worldwide assuring the user of unprecedented reliability.

**Transportability** The new HC-278H II hydraulic lattice boom truck crane provides a practical solution to customers that need to move a very large truck crane, quickly, legally and efficiently. This truck crane was designed by Link-Belt for fast unassisted stripdown and assembly.

Transporting this crane starts by removing major components including boom and counterweight ... all done by using the crane's standard live mast or optional 10' (3.05 m) boom extension with lifting sheaves.

Next, the standard lift-off system is put into action.

① The four self-contained hydraulic lift-off jacks are swung into the working position.

4:00 minutes



② The patented hydraulic actuated quick disconnect turntable bearing is released. The ingenious **adaptor with snap ring** allows for fast undecking or decking the upper-structure from the carrier in minutes ... not hours.

2:00 minutes



# Portability

## Ice Boom Technology



- ③ The lift-off jacks are fully extended, raising the upper up and clear of the carrier.

3:00 minutes



- ④ The carrier is driven away and a flatbed trailer is backed under the upper. The upper is lowered to the trailer and the lift-off jacks returned to the stored position.

5:00 minutes



**Carrier** A deep channel, triple box carrier design provides the optimum strength essential to maximize lift capacity while yielding lightweight axle loadings necessary to meet strict highway regulations. This 12x6 Link-Belt designed and built carrier also features twelve wheel air brakes, bogie beam axle suspension, full time hydraulic power steering, and standard aluminum fenders.

The new HC-278H II features a 430 horsepower (321 kW) **Detroit Diesel Series 60 engine**. This in-line 6-cylinder features Detroit Diesel Electronic Controls (DDEC) which incorporate multiple torque curves and variable speed idling for a low creep speed of .3 mph (0.5 km/h) and highway speeds of up to 58.5 mph (94.2 km/h), electronic throttle control for instantaneous response, and cruise control which reduces driver fatigue.



**Attachment** Link-Belt lattice tubular booms represent the latest advance in crane boom design. The HC-278H II provides the longest reach in the mobile crane business for increased job performance. The standard high strength, alloy steel lattice boom is available up to 330' (100.58 m) in length or 300' (91.44 m) + 100' (30.48 m) boom and jib combination. A "hammerhead" style attachment is also available for special applications allowing assembly / disassembly, transport and crane operation without unreeving load block.

To reach up and over buildings and obstructions, a 200' (60.96 m) maximum luffing boom plus 200' (60.96 m) luffing jib plus 30' (9.14 m) fixed jib is available.



# Pinpoint Hydraulic Control

## Close Loop Hydraulics For Dedicated, Responsive Performance

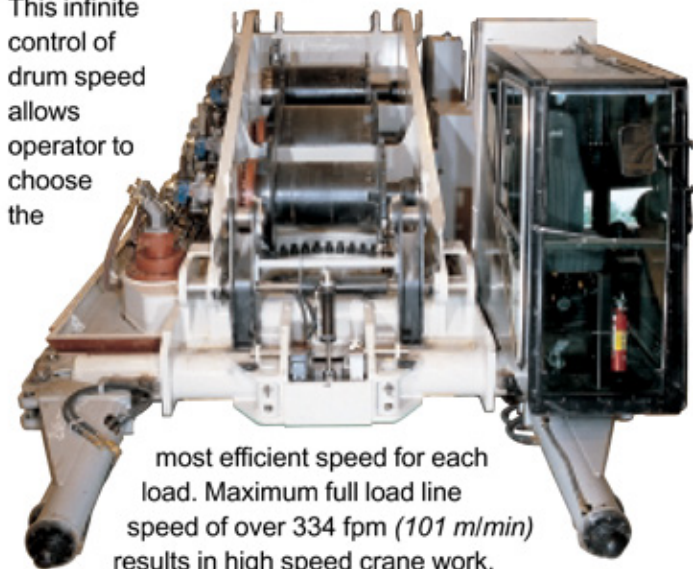


**Upperstructure** All welded, precision machined frame. All hydraulic lines and motors provide a 'clean' look with maximum service accessibility.

**Hydraulic Power System** A Detroit Diesel Series 60 diesel engine provides power to variable displacement independent piston pumps. These pumps provide power to individual hydraulic motors for fast, efficient operation of front and rear load hoist drums, boomhoist drum and swing drive. Fully independent hydraulic control allows drums to be run simultaneously at different speeds or in different directions. Large capacity hydraulic cooling keeps all hydraulics running in the green.

**Load Control** The variable displacement system provides infinite control of load speed in hoist and lowering modes. Load speed is directly proportional to lever movement.

This infinite control of drum speed allows operator to choose the



most efficient speed for each load. Maximum full load line speed of over 334 fpm (101 m/min) results in high speed crane work.

Multiple disc drum brakes are integral with drum drive units. Drum brakes and standard drum locking pawls automatically apply when control lever is in neutral position, keeping you in compliance with the latest codes.

**Fine Inching Control** For super precise control of load lowering/hoisting, hydraulic pump flow can be minimized by activating the 2-speed pump control switch located on the overhead console. This allows the operator to place loads with either the main or rear drums with extreme accuracy.

**Boomhoist** Independent hydraulic boomhoist is driven by a variable displacement, axial piston motor through a gear reduction system. This system features infinitely variable boomhoist speed, automatic boomhoist brake and a limiting device that restricts hoisting boom beyond recommended minimum radius.

**Swing** Variable speed and smooth swing is provided by the hydraulic swing system. A standard swing brake is applied by a convenient button on the swing lever. A hydraulically controlled positive, 360° swing lock is also provided for transport.

**Operator Control Station** Situated in an environmental, modular type cab, the operator comfortably sits in a cloth upholstered, fully adjustable seat for all-day comfort.

Single axis, armchair controllers provide positive, smooth control of all drum and swing functions. Standard drum



rotation indicators for front, rear and boomhoist drums are recessed in drum control lever handles. Also, a standard boomhoist foot control offers maximum productivity.

An overhead console contains switches for wiper, on/off drum controls, 2-speed drum control, and lights.

A complete complement of gauges monitor all aspects of the upper engine.

Mounted on the inside cab corner post, these gauges are easily viewed at a glance. Gauge panel also includes switches for house lock and hydraulic boomfoot pin and a swing brake indicator light.

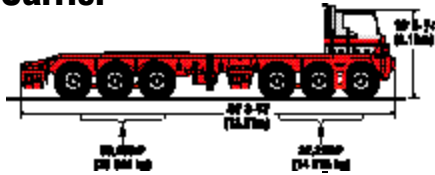
**Rated Capacity Limiter** - PAT DS-350G LMI (Rated Capacity Limiter) provides line riders, angle sensor, computer, graphic display and anti-two block equipment to provide the following information:

Boom length & angle, jib length & angle, load on hook, allowed load, load radius, tip height, anti-two block warning and function limiters, operation mode, machine configuration, provides an audio/visual warning when the load on hook is within 90% of the crane's rated load, provides an audio/visual warning and limits functions when the load on hook is at 100% of the crane's rated load. Provides simultaneous display of luffing boom and luffing jib angles.

**Note:** The DS-350G function limiters are activated for anti-two block and overload conditions. These limiters are designed to prevent hoist up on front and rear drums and boom down.

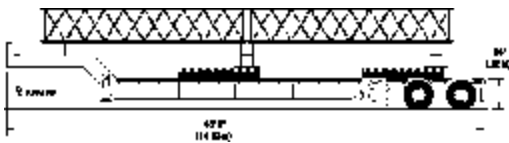
# Transport loads

## Carrier



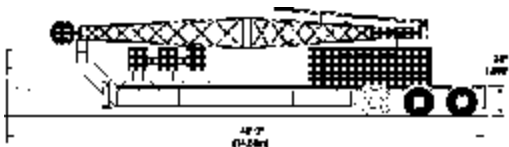
HC-278H II carrier 91,620 lbs (41 559 kg)  
Outrigger boxes and beams in place  
Outrigger jacks removed

## Load #2



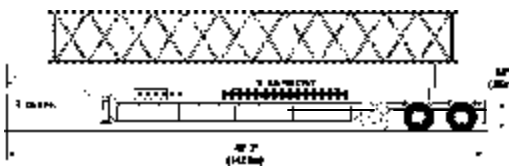
Upper cwt "C"	21,500 lbs	(9 752 kg)
Upper cwt "D"	21,500 lbs	(9 752 kg)
4 - 20' (6.10 m) jib extensions	1,770 lbs	(803 kg)
	<u>44,770 lbs</u>	<u>(20 307 kg)</u>

## Load #3



Upper cwt "A"	30,000 lbs	(13 608 kg)
Outrigger jacks, floats and handling tree	6,400 lbs	(2 903 kg)
Basic 30' (9.14 m) jib	1,900 lbs	(862 kg)
Rigging box	4,000 lbs	(1 814 kg)
	<u>42,300 lbs</u>	<u>(19 187 kg)</u>

## Load #4



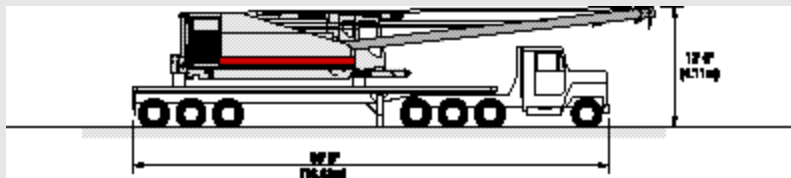
Upper cwt "B"	15,300 lbs	(6 940 kg)
Upper cwt "E"	10,000 lbs	(4 536 kg)
200-ton (181 mt) 6 sheave block	3,900 lbs	(1 769 kg)
50' (12.19 m) boom inserts	5,143 lbs	(2 333 kg)
	<u>34,343 lbs</u>	<u>(15 578 kg)</u>

## Load #1 (Alternate "A")



HC-278H II upper with base section, special 10' (3.05 m) extension with lifting sheaves and wire rope 85,024 lbs (38 566 kg)

## Load #1 (Alternate "B")



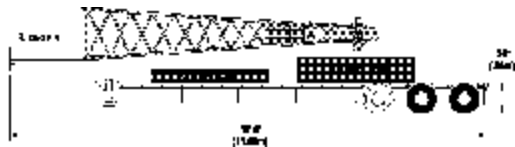
HC-278H II upper with live mast only 72,739 lbs (32 994 kg)

## Load #1 (Alternate "C")



HC-278H II upper with base section and live mast 77,511 lbs (35 158 kg)

## Load #5



Boom tip	5,175 lbs	(2 347 kg)
Bumper cwt "A"	11,400 lbs	(5 171 kg)
Upper cwt "B"	25,200 lbs	(11 431 kg)
	<u>41,775 lbs</u>	<u>(18 949 kg)</u>

## Loads #6 & 7



**Load 6:**  
100' (30.48 m) boom 11 598 lbs (5 261 kg)

**Load 7:**  
100' (30.48 m) boom 9,650 lbs (4 377 kg)





## Available attachments provide strength and versatility

### Conventional open throat boom

- 60' - 330' (18.29 - 100.58 m) conventional tube boom
- Using pin-connected sections and open throat top section, the HC-278H II provides the longest boom lengths in this machine class.
- Main chord members are made with 100,000 psi yield material with high strength lattice.
- Boom suspension is achieved through 18-part boom standard reeving with dual pendant ropes.
- Standard equipment deflector rollers protect lattice sections from wire rope scuffing.

### Hammerhead boom

- 45' - 245' (13.72 - 74.68 m) three-piece design utilizes 30' (9.14 m) base section, 10' (3.05 m) taper section and a 5' (1.52 m) hammerhead top section.
- 200-ton (178.6 mt) maximum capacity

### Boom and jib — open throat

- 300' + 100' (91.4 + 30.5 m) tube boom + fixed jib
- Jib is common to other Link-Belt models.

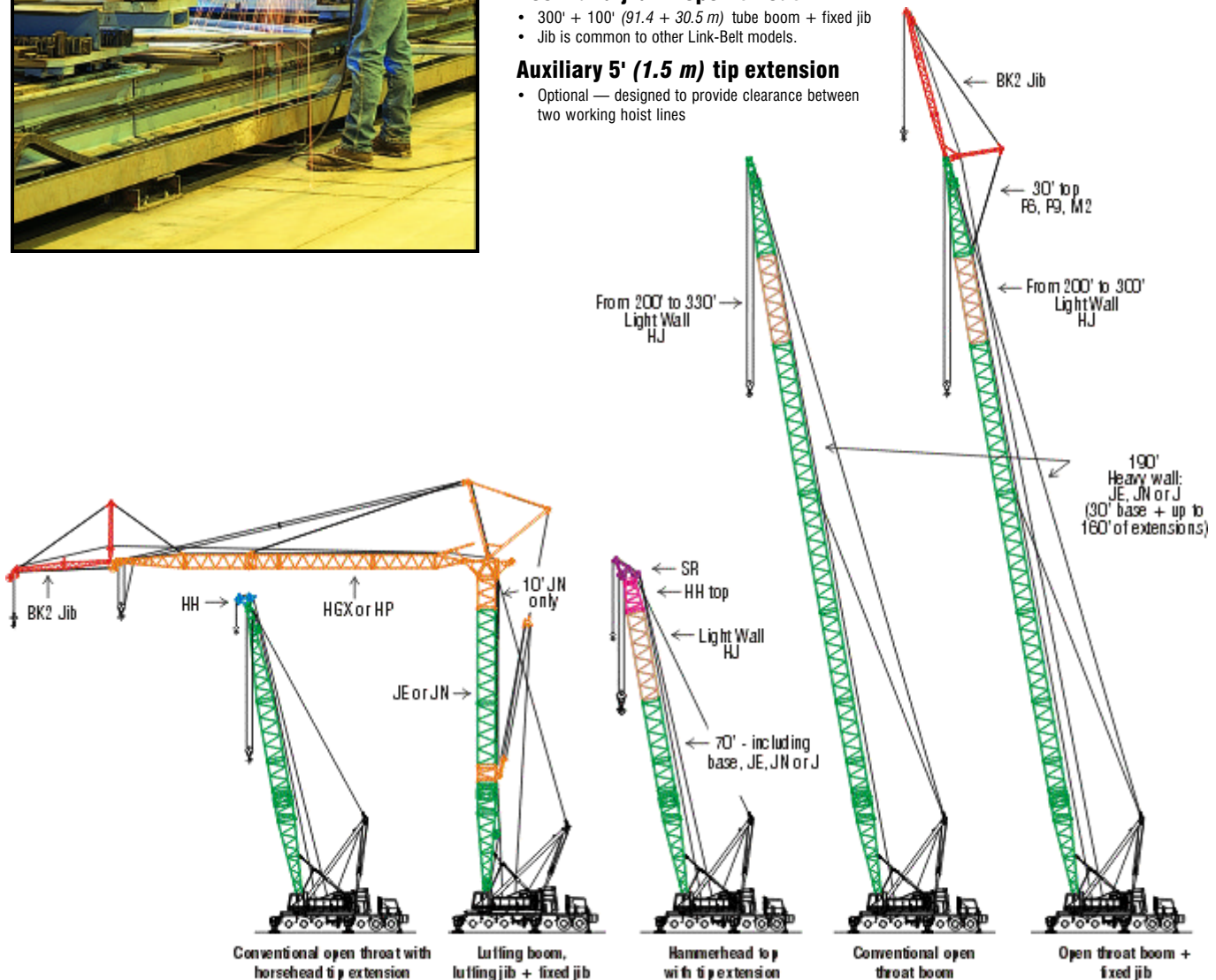
### Auxiliary 5' (1.5 m) tip extension

- Optional — designed to provide clearance between two working hoist lines

### Luffing boom attachment

- 200' + 200' + 30' (60.96 + 60.96 + 9.14 m) luffing boom + luffing jib + fixed jib
- Conventional boom on HC-278H II also serves as luffing boom
- Luffing attachment for the HC-278H II is the latest design with luffing jib reeving anchored off the luffing boom to keep reeving down low within operator's view — easy to assemble.
- Top section assembly of luffer transports as one piece and makes for fast, easy assembly to the luffing jib.
- This attachment flexibility and simplicity makes the LS-218H II — conventional or with luffing attachment — the first machine of choice to go out of the yard and to the job!

All boom sections are manufactured in Lexington, Kentucky for fast, easy service, parts and replacement.



# Link-Belt

Lexington, Kentucky  
[www.linkbelt.com](http://www.linkbelt.com)

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