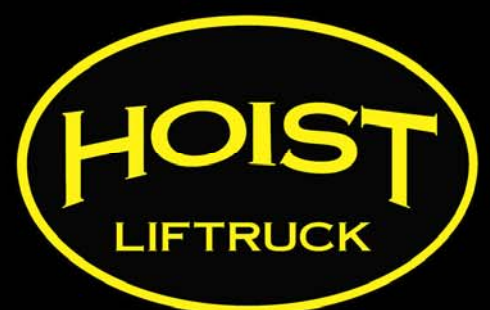


# ECH

## *Series*







# ECH Series

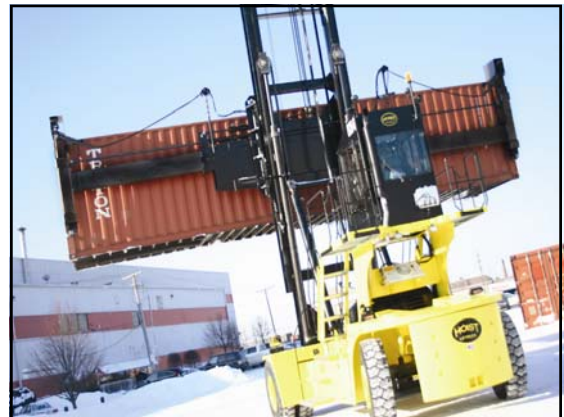
The **ECH-Series** is designed to quickly and safely stack/unstack empty ISO containers with models that can handle:

- up to 8 high stacking of 8'6" containers or 7 high stacking of 9'6" containers with single stacking attachment.
- up to 9 high (2on7) stacking of 8'6" containers or 8 high (2on6) stacking of 9'6" containers with double stacking attachment.

The **ECH-Series** is the fastest and most stable empty container Handler on the market with:

- the fast lifting speed - 125 fpm [38 m/m]
- the largest width over the drive tires - 182 in. [4,623mm]
- the largest wheelbase - 180 in. [4,572mm]
- the largest reserve - 190%

The modular design allows for reduced freight cost, easy assembly and efficient parts replacement. The elevated cab position and angled glass roof provides the operator with superior visibility at all load elevations. The unique mast design, which has a rigid inner mast and outer mast, reduces torsional stresses for improved durability and increased visibility.





# OPERATOR COMFORT

For maximum performance, an operator must have all the essential tools around them. The **ECH-Series** is designed with advanced ergonomics for maximum comfort and visibility.



- Elevated cab position provides superior visibility in all directions.
- Angled overhead window provides excellent upward visibility.
- Dashless cab design provides completely unobstructed forward visibility. Large cab area provides ample floor and elbow room.
- Standard cab heater and optional air conditioning.
- Tinted glass to protect against glare; sliding side windows; front/rear/overhead wipers.
- Luxury air ride seat with retractable seat belt.
- Easy entry/exit stairway/platform design with non-skid steps and handrails for three-point contact.
- IQAN display featuring all gauge/warning functions and diagnostic capabilities and user interface for making vehicle adjustments.
- Intuitive multi-function single joystick control for ease of use.
- Tilt-steering column. Column-mounted direction control for easy use.
- Electronic push-button parking brake control.
- Isolated rubber mounts between cab and chassis, as well as insulated cab, provide smooth ride and reduced noise levels.

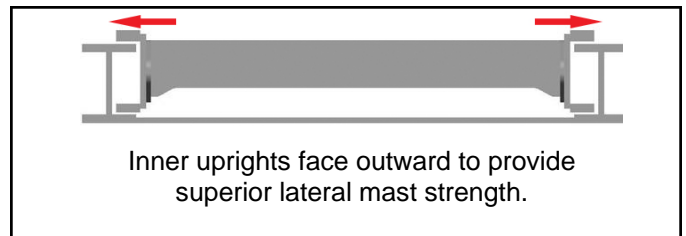


# SUPERIOR VISIBILITY

The **ECH-Series** has a unique mast design that provides excellent visibility and durability, allowing quick and safe empty container handling, as well as decreased maintenance costs.



Operator has unobstructed visibility through the mast (above), upward through the angled glass on top of the cab (below). Excellent operator visibility at all load elevations without having to adjust body position.



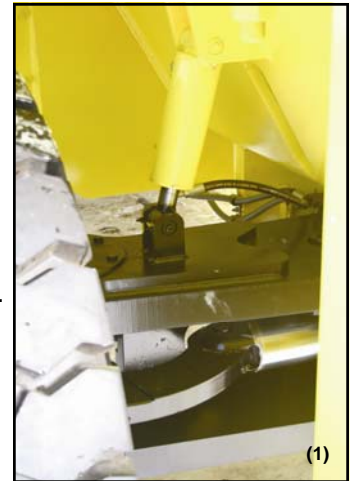
- Rigid inner mast and telescoping outer for reduced torsional stresses, and increased durability and visibility. (1)
- Wide-view mast with nested cylinders and chains for increased visibility. (2)
- Main mast rollers utilize Timken tapered roller bearings. (3)
- High-load, high wear-resistant composite plastic side thrust bearings for improved performance and life. (4)
- NitroSteel© cylinder rods have superior corrosion resistance, improved lubrication retention and wear resistance compared to chrome rods.

# SECURE HANDLING

The **ECH-Series** comes standard with a side-post attachment that extends/retracts to handle 20- and 40-foot empty containers. The attachment can also be quickly adjusted to handle 53-foot containers.



- Industry-first Automatic Locking steer axle for increased stability at elevated load heights. (1)
- Standard side-post attachment with two (2) ISO rear automatic locking vertical twistlocks. (4)
- Vertical floating end beam heads and floating twistlocks; integral carriage with +/-20" sideshift.
- Automatically or manually extends/retracts to standard 20- and 40-foot pick points for handling containers up to 53 feet. (5)
- Twistlock engagement indicator lights on carriage and inside operator's cab. (2,3)
- Interlock safety system insures proper locking sequence; overload warning system.
- Interrupt system prevents mast lowering when the spreader is landed on a container, eliminating slacking of hoses, cables and chains, as well as decreased shock on spreader.
- Lift interrupt system disables lift mode when twistlocks are not properly locked/unlocked.
- Horn and audible backup alarm; amber strobe light.
- Plastic composite slides improve reliability and reduce maintenance requirements.
- Exposed spreader cylinders provide excellent serviceability; remote hydraulic valve eliminates additional hoses and wiring to mast. (see Service Page)
- Halogen lights: forward and rear work lights; lights on spreader to illuminate engagement heads; stop/tail/turn indicators; stairway safety lighting.
- Dual Fender Mounted side mirrors.





# DOUBLE STACKING

Double stacking of containers with the optional Hoist twin pick **ECH-Series** attachment is an important step in the evolution of increasing productivity in the empty container handler industry.

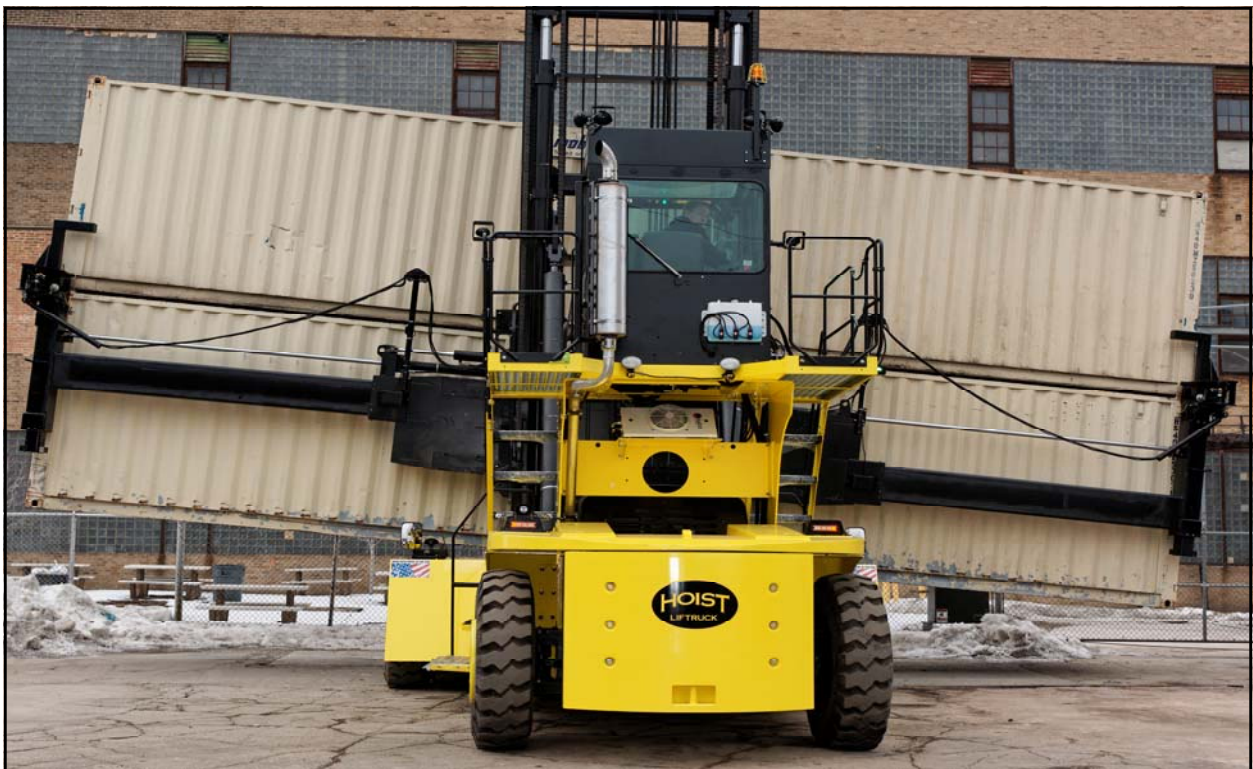


The Hoist ECH-Series was specifically designed to standup to the rigors of double stacking applications. With a more rigid inverted mast design, a wider stance chassis, standard 14:00 tires, heavy duty powertrain and an industry best reserve, the ECH-Series is up to the biggest lifting challenges.

# SLOPE PILING

The **ECH-Series** integral slope piler carriage allows for efficient handling of containers on trailers or uneven ground.

- Hydraulically powered slope pile (vs. mechanical) providing the operator full control for precise positioning.
- Plus/minus 6° from horizontal.
- All **ECH-Series** trucks equipped with the optional twin pick attachment include the integral slope piling carriage as standard.
- Standard single pick attachments utilize a floating end head design to accommodate uneven containers but can be equipped with the integral slope pile carriage as an option.





# TWIN PICK ATTACHMENT

The **ECH-Series** optional twin pick attachment is designed to maximize efficiency by allowing double stacking of two containers at a time



-The telescopic side lift spreader features a low profile frame for increased visibility at greater stack heights.

-The Hoist Twin Pick attachment allows you to take containers straight off the ground, and stack them up to 9 high with 2 on 7, allowing you to stack higher, meaning more open space.

-Horizontal lifting hooks engage the side apertures of the top corner castings of the lower container while hydraulically powered side clamps secure the corner castings of both the lower and upper container.

-Like its Hoist single pick counterpart, the twin pick attachment also features hydraulic sideshift, an interlock safety system with LED indicator lights and both manual and automatic mode for the extend/retract function.





# POWER & RELIABILITY

*The ECH-Series carries the Hoist reputation of reliable and durable liftrucks. While some high-quality components are optional on other liftrucks, Hoist makes them standard for a true heavy-duty forklift and to exceed customer expectations.*

## Engine

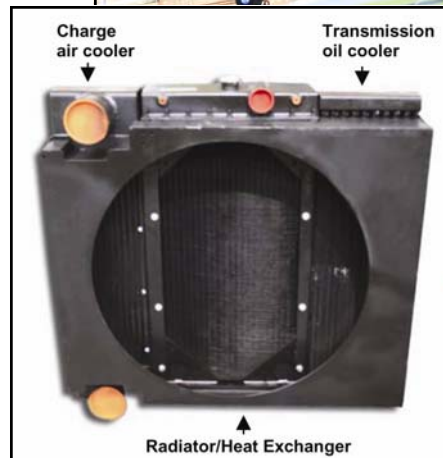
- Cummins 6.7 liter, 215 HP turbocharged diesel; Tier III-compliant.
- Charge air cooler with side-by-side integral radiator and transmission oil cooler for maximum heat dissipation, air flow and serviceability.
- Two-stage heavy duty air cleaner with electronic filter restriction indicator and high air intake providing maximum efficiency.
- 12-volt electrical system with 12-volt starter motor and alternator for dependable starting and operation.
- Two (2) 12-volt industrial batteries in parallel rated for 925CCA each for reliable starting in all conditions.
- 95-amp alternator with built-in regulator.
- Bolt-on high capacity fuel tank for increased run times and ease of maintenance: 150 gallons. [568 liters]

## Transmission

- Dana 32,000 powershift transmission with three forward/reverse speeds. Common transmission used in off-highway applications.
- Electronic Declutch system for precise movement at higher RPMs.
- 12-plate modulation for smooth shifting and protection against directional change shock loads; gears are constant mesh during Shifting.
- Dedicated transmission oil cooler.

## Hydraulic System

- Electronic joystick control allows smooth, comfortable, controlled operation of all functions.
- Load-sense "on demand" steer pump increases vehicle efficiency; 27% more fuel efficient than individual gear pumps.
- High capacity return filter with electronic restriction indicator for maximum efficiency.
- Dedicated External hydraulic oil cooler for reliable performance.
- Bolt-on high capacity hydraulic tank provides additional cooling capabilities and ease of maintenance: 160 gallons. [ 606 liters]
- CANBus control simplifies wiring; provides diagnostic capabilities.
- Accumulator in lift circuit protects against shock loads.



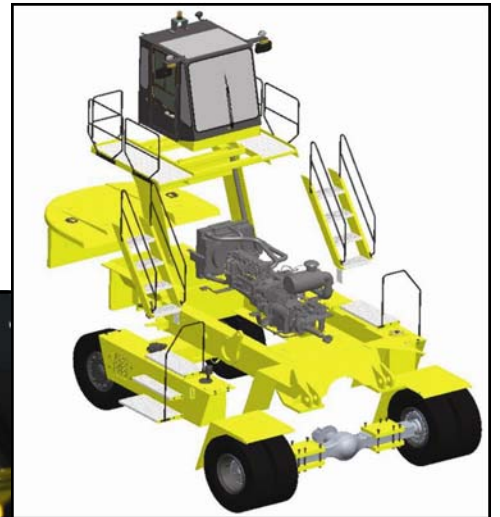


# STRENGTH & SERVICEABILITY

*Hoist's quality line of liftrucks starts with a strong foundation. The **ECH-Series** chassis provides strength and durability while the modular design allows for easy shipping and assembly, as well as easy parts replacement.*



- Modular chassis design with bolt-on sections provide for fast and cost-effective shipping, easy assembly and customization while protecting all vital systems and components.
- Vehicle can be fully containerized to save customers as much as 50% in shipping costs versus RoRo shipping.
- Minimizes initial setup time of vehicle at customer's location.
- Provides superior serviceability. Bolt-on assemblies allow for easy part replacement without compromising the structural integrity of the vehicle.







#### **Drive Axle**

- AxleTech planetary drive axle provides long life and ruggedness; wide stance design for increased stability.
- Outboard wet disk brakes with force-cooling for improved performance and longevity.
- 14.00 x 24 tires provide long life and low operating costs.

#### **Steering System**

- Load-sense hydrostatic steering for decrease effort and reliable control.
- Heavy duty welded beam steer axle design protects cylinder from damage.
- Steer knuckles utilize Timken tapered roller bearings with easily accessible grease points.
- Full lock-to-lock steering in 3-4 steering wheel revolutions to minimize operator fatigue.
- Safest-in-the-industry lockable steer axle for increased stability at elevated load heights.

#### **Chassis**

- Fully welded rigid steel frame provides the strength and durability for the most rugged applications and harshest yard conditions.



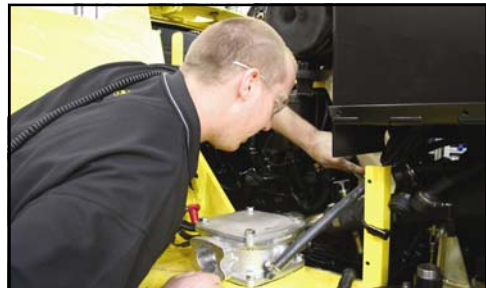
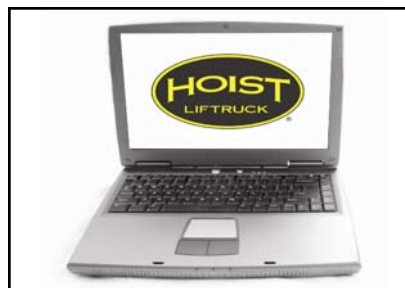


# SUPERIOR SERVICE

- Hinged engine hood with gas strut supports provides quick access to the bolt-in power train and all related components
- Bolt-on tanks, counterweights, cab superstructure and stairways can be removed for additional access
- All hydraulic hoses/wiring harnesses routed for easy inspection
- Attachment-mounted main hydraulic valve minimizes hosing routed through mast and simplifies hydraulic plumbing
- Steel bushings on non-rotating pin bores eliminate the need for ever having to do "line bore" repairs
- External attachment spreader cylinders for easy access
- Diagnostic multi-gauge eliminates the need to tap into hydraulic lines
- IQAN MD3 display includes diagnostic capabilities eliminating the need for a laptop computer



Utilizing CANbus technology, RemoteTech is a vehicle management system incorporated into the **ECH-Series** that provides superior serviceability, preventative maintenance, vehicle monitoring, automated customer support and the ability to customize vehicle functionality. When an issue is detected, RemoteTech will automatically record the issue and notify the operator via MD3 display inside the cab, as well as via email sent to authorized personnel list detailing vital information of the issue. Service technicians can also quickly identify issues through electronic diagnostics and view fault code history. Many vehicle functions can be adjusted remotely, via modem, to an operator and/or company's preference in minutes via optional email service.

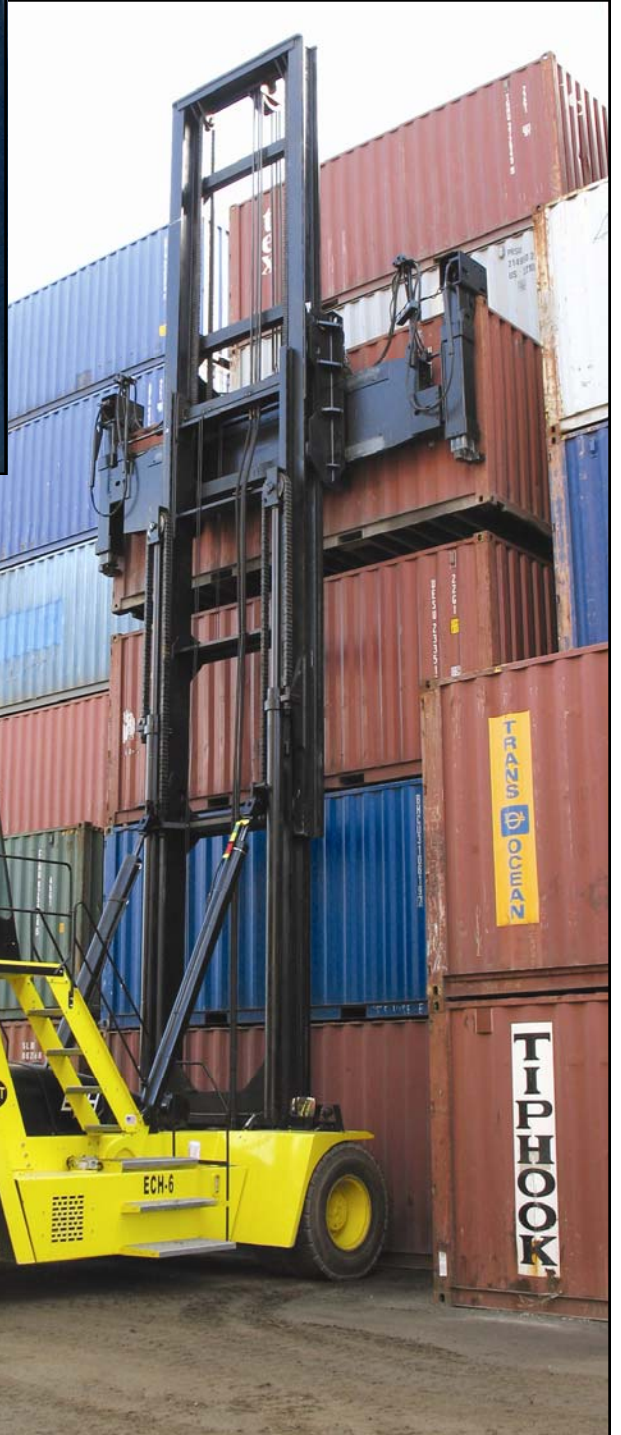


- Unlike similar systems that rely on 3rd party companies to program and operate the system, RemoteTech is programmed and operated by Hoist. Customization and adjustments are made quickly to customer's preference.
- Decrease downtime and repair costs by identifying and resolving issues early.
- Parameters such as vehicle/lifting speeds and electronic fingertip control functions can be adjusted on MD3 Display.
- Detect issues such as clogged/failing filters, overheated engine, and vehicle overload and impact.
- Great for fleet management. Record and monitor engine hours, service intervals and operator usage. Limit access to specific operators with key code capabilities Optional.



# MADE IN THE U.S.A.

More than 75% of the material on the **ECH-Series** is made in-house at Hoist's Bedford Park, Illinois factory, while the remaining components come from reputable North American vendors. Hoist uses many of the same North American components throughout its product line to keep costs low and make parts immediately available 24-hours a day.



Not only is the **ECH-Series** extremely eye-appealing, it has been designed and tested to meet or exceed current, worldwide regulations for stability, sound levels and safety. Hoist's design engineering staff uses the latest CAD three-dimensional solid modeling technology to develop the highest quality lift truck in terms of performance, durability, operator safety, comfort, visibility and serviceability.







The combination of in-house manufacturing and reputable, domestic vendors, allows Hoist to have some of the fastest lead times in the industry. Hoist's standardization of components not only helps with the fast lead times, but more importantly provides customers with excellent service and parts support. By providing a single, premium brand such as Cummins diesel engines and AxleTech drive axles, Hoist is able to provide maximum support for each component. While other manufacturers may provide a wide range of options, sufficient support for each of those options may not be consistent.



Hoist's CNC department, which consists of more than 10 CNC machines, operates 24 hours a day machining various parts for components such as cylinders, steer axles and wheels. These CNC machines ensure fast and accurate machining, which also assists in superior lead times and parts support.



Every Hoist liftruck is backed by a company dedicated to complete customer satisfaction. From the initial contact, through the sale and for as long as you own a Hoist liftruck, the experienced staff works for you.

Hoist also has a world wide dealer network that keeps a majority of its replacement parts in stock for immediate pick up or delivery, as well as technicians to assist with preventative maintenance repairs. Visit [www.hoistlift.com](http://www.hoistlift.com) to locate your nearest Hoist dealer.



- 12-month/2,000 hour warranty [parts and labor]. Optional extended warranties up to 12,000 hours
- Operator, parts and service manuals included
- 24-hour parts and service support





# **ECH** *Series*



*Taking your products to greater heights.*

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Made in the USA



Hoist Liftruck Mfg., Inc. continually improves its products.  
Specifications are subject to change without notice.