

ERC

045-070VG

**ICE Performance
Without the Emissions!**



Electric Rider Trucks 4,500 - 7,000 lbs.

Alternative Fuel-Ready

Yale 
People. Products. Productivity.

Yale® Industrial Grade

Tough, industrial applications require industrial grade electric rider forklift trucks that add productive value, operate at maximum uptime, perform at demanding performance levels, and require minimal cost to operate. Yale ERC-VG lift trucks are designed and built with Industrial Grade Critical Components, providing outstanding productive value and economic life. It's a difference you can count on!

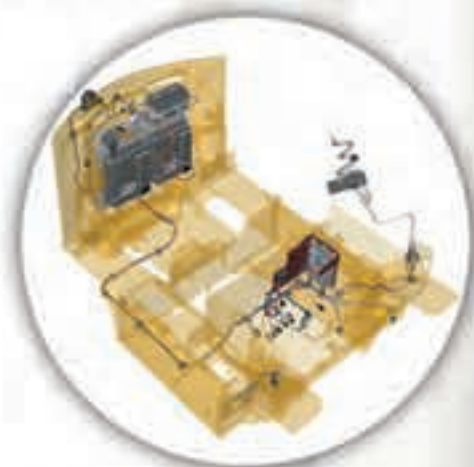


Motors

Electric motors ensure the lift truck travels and lifts at speeds required for maximum productivity. AC Motors eliminate brushes, reducing maintenance costs. Steering motor functionality is integrated into the hydraulic motor, simplifying the system and increasing reliability. All motors are insulated with Class H insulation for superior heat resistance.

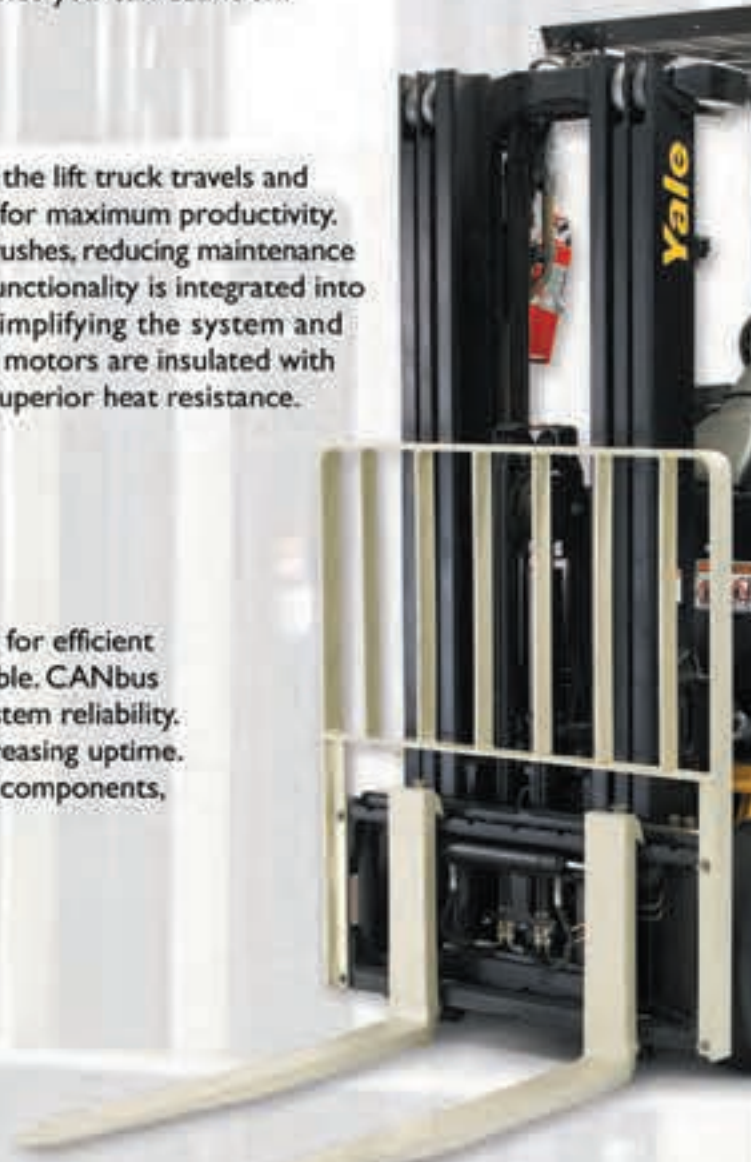
Electrical System

Linking the electronic components of a lift truck together for efficient operation, the electrical system must be durable and reliable. CANbus technology reduces wiring and connections, improving system reliability. Sealed electrical connections resist moisture and dirt, increasing uptime. The innovative thermal management system protects key components, while ensuring maximum productivity.



Drive Axle

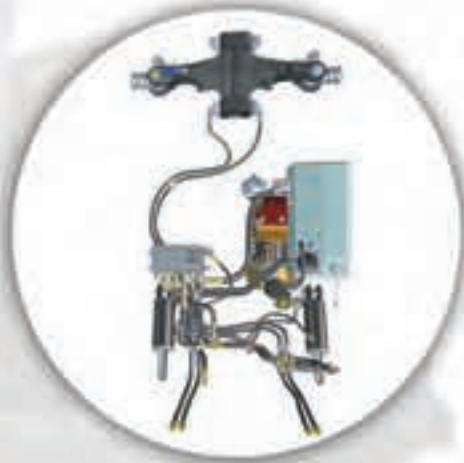
The drive axle of a lift truck is required to absorb significant forces during normal operation. High strength gears and shafts resist stress from quick directional changes. The tough cast housing absorbs shock and vibration. Power Assisted Brakes reduce brake wear and strain on drive unit components.



Critical Components



Truck shown with optional equipment



Hydraulics

Hydraulics are the "muscles" of a lift truck, providing the force necessary to lift heavy loads all shift long. O-Ring Face Seal fittings resist leaks. The 10 micron hydraulic filter helps keep the hydraulic fluid clean. Cast iron "stacked" valve sections provide excellent rigidity.



Steer Axle

Steer axles support the significant weight of the counterweight, while being subjected to road shocks and vibration. Tough cast ductile iron axles provide one piece integrity for outstanding durability. Tapered roller bearings absorb multiple loading forces, improving reliability. The Yale® Continuous Stability Enhancement system enhances truck stability in a simple, maintenance free design, without compromising uneven surface travel.

Mast

A lift truck's mast is required to absorb significant stress during lifting and lowering operations, without incurring excessive maintenance downtime. Canted load rollers absorb front to back and side to side forces for better durability and reduced adjustments. Full face contact of rollers prevents excessive wear of the channel, prolonging roller life.



Frame

The unitized design and the welded steel construction of the Yale® ERC-VG frame provide better rigidity and excellent protection for the internal components. The exceptional strength and durability of the frame are designed and tested using computer generated Finite Element Analysis.

Yale® ultimate productivity

Performance and productivity are standard equipment on every Yale® truck. With the ERC-VG series, productivity cost savings are achieved through lower truck operating expenses, reduced maintenance costs, extended maintenance intervals, and increased throughput.



All trucks shown with optional equipment

Available in 36, 48, and 80 volts, ERC-VG trucks are designed to meet and exceed your application requirements. All models come standard with cool running, low maintenance AC traction and hydraulic motors.



The ERC-VG series utilizes proven AC technology coupled with the "Intellix" VSM, providing enhanced performance throughout the usable battery discharge cycle. This highly efficient system also provides **longer battery run time** for increased throughput.

AC motors provide powerful acceleration, fast travel speeds (both with and without a load), and fast lift/lower speeds. The innovative **Thermal Management System** keeps productivity high while protecting key truck components.

The optional **Premium Performance Package** provides up to a 10% increase in traction and hoist speeds, providing unmatched levels of productivity.

Four **operator selectable performance modes** and the innovative "Extended Shift" functionality allow the truck's performance to be tailored to the customer's application as well as the operator's skill level, increasing efficiency.

Operator comfort is enhanced on the ERC-VG with increased floor space, improved operator seat position, and non-cinching seat belt. Reverse driving is made easier with the rear drive handle and swivel seat options.

The optional **Automatic Park Brake** automatically sets when the truck stops, simplifying motions for the operator.



Selectable performance modes



Optional Premium Performance Package



Longer battery run time

ultimate
performance

Yale® intelligent ergonomics

Operators prefer Yale trucks. Operator comfort enhances productivity and reduces fatigue. With maximized visibility, smooth, precise mast positioning, low-effort steering, and "human-engineered" operating controls, everything about these trucks makes them easy to operate.



All trucks shown with optional equipment

The Yale® ERC-VG is an "operator's truck" with large, textured grab handles, deep, anti-skid steps for easy entry and exit, thumb-actuated directional controls, seat-side power disconnect, spacious, easy-to-reach storage areas on the cowl, and a tilt steering column with optional tilt-memory and telescoping for reduced operator fatigue.



The ERC-VG series' open floor plate design maximizes the available space for the driver's feet, providing up to **20% greater floor space**. Power assisted braking reduces brake pedal effort. Placement and angles of accelerator and brake pedal provide maximum operator comfort. The extra-thick floor mat absorbs shock and reduces operator fatigue.

The operator's seat is precisely positioned to provide a more comfortable, efficient operator position, enhancing visibility through the mast, resulting in less operator fatigue. The standard steering column is infinitely adjustable. The **optional Telescoping Steer Column with Tilt Memory** provides superior adjustability to accommodate a wide range of operator sizes.

Rear driving comfort has been enhanced with a convenient optional **rear drive handle with horn button**. The rear drive handle, in conjunction with the optional swivel seat, creates a comfortable, secure reverse driving position. Non cinching seat belts provide superior operator comfort.

The optional Yale **Accutouch minilever electro-hydraulic controls** with thumb activated directional control offer an excellent ergonomic design with shorter reach and throw and considerably less effort required to operate versus mechanical hydraulic levers. The fully-adjustable armrest with palm rest is contoured for maximum comfort.



Superior floor space



Rear driving comfort



Standard hydraulic controls

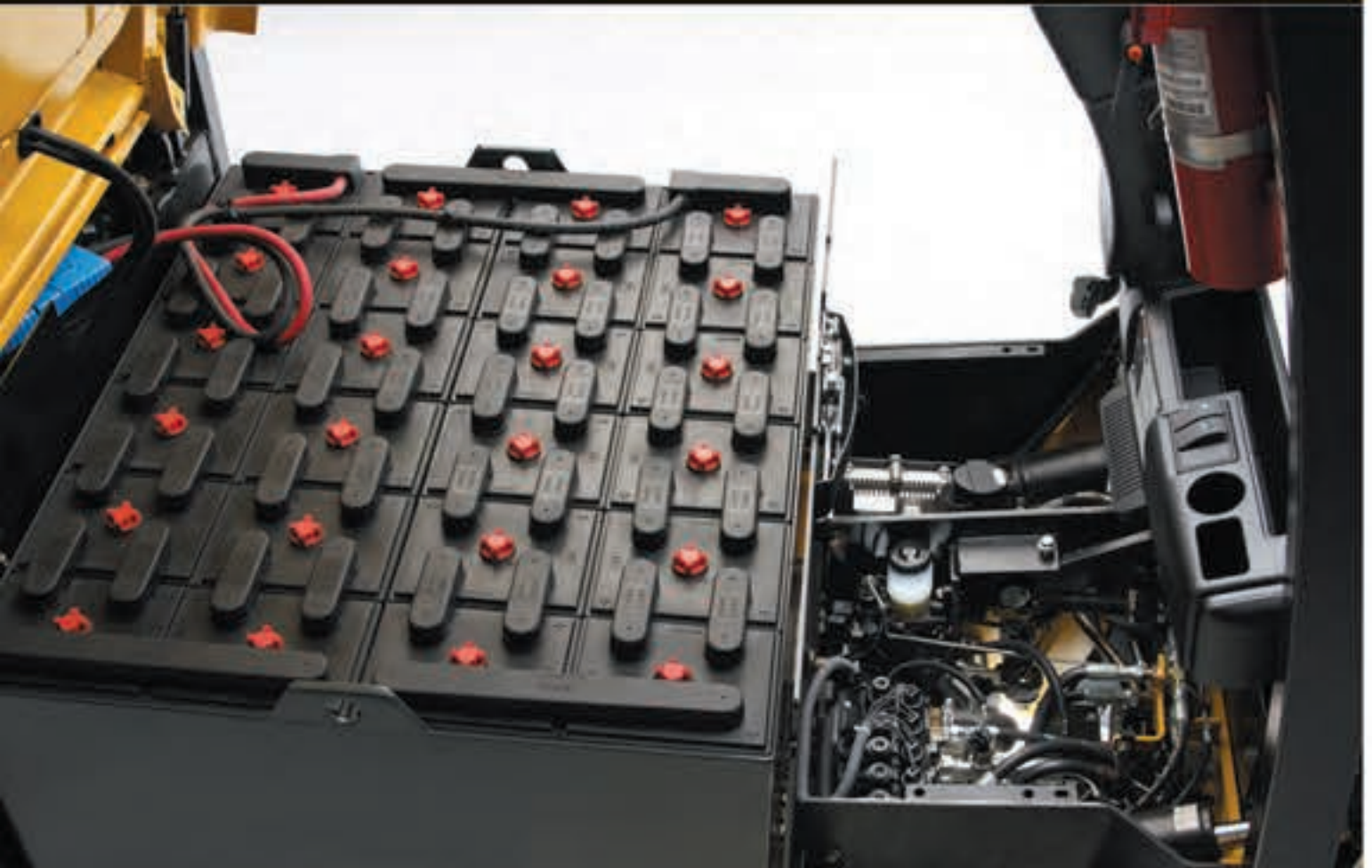


Optional Accutouch minilever

innovative
design

Yale® gold service

Not only is the ERC-VG series designed to require less maintenance; it is also designed to be extremely easy to service. The rear-opening, one-piece steel hood and the on-board diagnostics of these trucks is designed with service details in mind. The outstanding component access makes servicing fast, easy, and convenient. It's the new standard in truck serviceability.



All trucks shown with optional equipment

At Yale, our engineers have equipped the ERC-VG series trucks with easily-removable floor plates, a rear-hinged hood that opens to nearly 80 degrees, common-sense wire and hose routing, clearly numbered wires with sealed connectors, CANbus technology, and brushless AC motors. All make the VG series easy to service and maintain.



Yale has **reduced regular service requirements** on the ERC-VG series truck. Standard AC traction and hydraulic motors eliminate brushes and associated rigging, reducing maintenance. The efficient AC electrical system only requires one contactor, eliminating directional contactors. Motor controllers are mounted on finned heat sinks with integral cooling fans, greatly reducing heat.

Optional **battery side extraction with rollers** and a new low-profile side gate with quick release mechanism and traction cutout provide quick, safe, and efficient battery access and changing.

Two-piece floor plate allows for quick and easy service access. **Removable floor plate side panels** provide additional entry to key components.

The **Intellix VSM (Vehicle Systems Manager)** continuously monitors and controls all major truck functions for efficiency and proper operation. The innovative ERC-VG display alerts the operator of any system concerns.

Hour meters for truck, traction and hydraulic systems are accessible through the display. Extensive **on-board diagnostics** are also incorporated into the display to communicate service codes to the trained technician, enabling quick and accurate repairs.

Power Assisted Braking helps reduce stress on key drive unit and braking components, increasing component life. Auto Deceleration System reduces the demand on the brakes, further improving brake life.



Intellix Vehicle Systems Manager



Innovative display



Easy service access

maximum
access

Yale® low cost of ownership

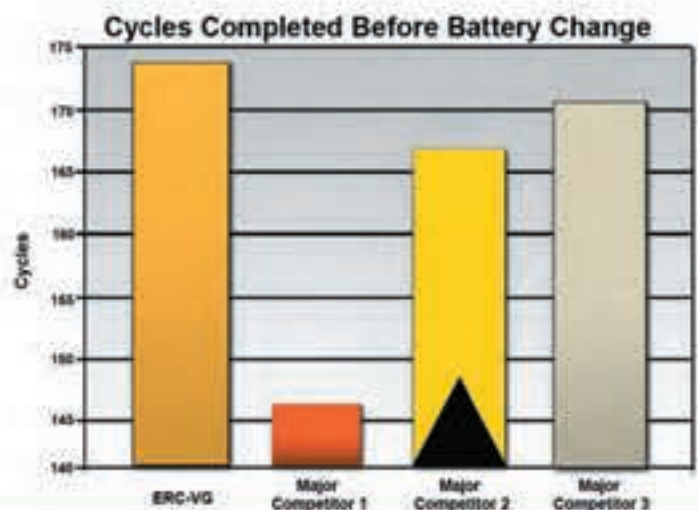
The purchase price of a truck is only a small part of its overall cost. A lift truck's cost of ownership is the largest portion of dollars spent and includes such elements as periodic maintenance, unscheduled repairs, brakes, and power costs. Yale® engineers focused on operating cost savings with reduced maintenance requirements, superior serviceability, enhanced durability, and extended service intervals.



All trucks shown with optional equipment

The highly efficient design of the ERC-VG improves battery shift life, saving dollars in energy costs, as well as increasing productivity through improved uptime. The ERC-VG series offers substantial operating cost savings over competitive models.

Source: NMHG Counterbalanced Development Center



ERC-VG series trucks provide tremendous flexibility to **customize the truck's hydraulic and traction performance** to the application. Whether you require extended battery shift life, aggressive hydraulic performance or fast travel speeds for long hauls across a factory floor, your trained Yale technician can maximize your VG's performance.

AC traction and hydraulic motors completely eliminate brushes and associated rigging, **reducing maintenance costs**. The system is further simplified by combining the hydraulic and steering functions into one motor.

Optional 16" x 7" steer and 21" x 9" drive tires offer greater stability and durability. An optional hydraulic accumulator affords shock and vibration dampening to the load, the truck, and the operator. Various environmental packages are available including UL EE and cooler/freezer options, ensuring the right truck for the application.

The **Auto Deceleration System** automatically slows the truck when the operator's foot is removed from the accelerator, reducing brake usage and associated brake maintenance requirements.

The unique **Power-Assisted Braking** system further increases brake and drive train life by automatically utilizing traction motor braking in proportion to operator brake pedal pressure, reducing the demand on the service brakes. The rugged drum-type brakes feature a strengthened "backing plate" for excellent durability.



Brushless motors



Power-assisted braking



Excellent battery shift life

intelligent
investment

Yale[®] environmentally trustworthy

At Yale, we are developing and producing lift trucks that improve efficiency and reduce energy consumption for our customers' operations.

Yale has been a leading producer of zero emission trucks for years, and in 2009 we are rolling out a new generation of innovative, even more efficient trucks than ever before. We are collaborating on next generation energy technology to enable a broader group of customers to more easily make the switch from internal combustion engine trucks to zero emission electric trucks.

Zero emission electric powered lift trucks –

Yale is one of the largest volume producers of zero emissions electric lift trucks in the North American market. The company is among the earliest adopters of energy efficient AC motor and controller technology. Yale's continued pursuit of improved energy efficiency is affirmed by competitive testing which shows that our ERC-VG electric rider product offers the best energy efficiency (energy used per load moved) of the leading lift trucks in its class in North America.

Green innovations – For our electric trucks, Yale has introduced a system that recaptures energy into the truck during braking. This energy is then reused, lowering the overall energy consumption of the truck. Through innovative engineering, we reduce non-productive energy use throughout the vehicle by means of weight reduction, drive train efficiency (patents pending) and hydraulic system efficiency. Yale is among the first to use working fuel cells in actual applications.



Zero Emissions

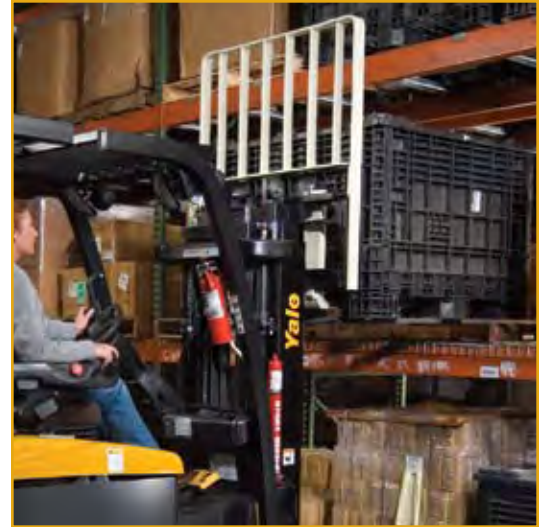


Working Fuel Cells

Yale[®] application matched performance

From tough, short shuttle applications or long runs, to ramp usage, Yale's **ERC-VG** is built for varied applications. Adjustable performance parameters allow for customization to the specific needs of the application or the operator. The Extended Shift functionality provides an excellent balance between battery run time and truck productivity. Higher levels of productivity can be obtained with the optional Premium Performance Package.

- **Return to Set Tilt** option brings the load to a preset position when tilting for easy operation.
- **Operator Selectable Performance Modes** allow varying levels of truck performance.
- **Premium Performance Package** option provides up to 10-12% increase in travel speed and lift speed.
- **Rapid Charge** option further improves productivity by eliminating battery changes.
- **36, 48 or 80 volt systems** provide excellent performance.
- **80 volt control system** option for maximum performance in long-haul applications.
- **Extended Shift** can be disabled for increased productivity levels.



Return to Set Tilt Option



Operator Selectable Performance Modes



80 Volt Control System Option

ERC-VG highlights/options



Dependability highlights

AC traction and hydraulic motors
 Intellix VSM (Vehicle Systems Manager)
 Double sealed electrical connections
 Electronic horn
 O-ring face seal hydraulic fittings
 Power Assisted Braking
 Canted, full face mast rollers
 Tough, cast ductile iron steer axle
 High strength drive axle gears and shafts

ERC-VG

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Dependability options

Accumulator
 Full LED Light Package
 Impact Monitor
 Operator Daily Checklist
 Hydraulic System Monitoring
 Attachment Carriage

ERC-VG

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Productivity highlights

Transistorized AC powered traction control with smooth directional changes
 Brushless AC traction and hydraulic motors
 On-demand power steering
 Enhanced dash display
 Advanced Thermal Management System
 Transistor hydraulics
 36 volt power
 Auto Deceleration System (automatically slows truck when accelerator pedal is released)
 Extended Shift functionality
 Operator selectable performance modes
 48" high load back rest extension
 Type "E" UL construction

ERC-VG

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Productivity options

Premium Performance Package
 Accutouch e-Hydraulic Mini-levers with thumb directional control
 Foot Directional Control
 48 and 80 volt power
 10 degree fwd/5 degree back (Bottler's) tilt
 Return to Set Tilt
 Various mast heights
 Integral sideshifter
 Cold storage/corrosion packages
 Various tire options
 Various light packages
 Optional battery compartments
 Audible Alarm - Reverse Operation
 Rapid Charge

ERC-VG

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Ergonomic highlights

Ergonomically designed contoured, cushioned seats
 Non-cinching seat belt
 Seat belt and hip restraint
 Excellent maneuverability
 Operator Interface Display
 Hi-Vis mast
 Seat-side mechanical hydraulic control levers
 Tilt steering column
 Wide open floor
 Power Assisted Braking
 Low effort brake pedal
 Low height entry step
 Rubber floor mats
 Seat-side Thumb Activated Directional Control

ERC-VG

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Note: Std = Standard, Opt = Optional

Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale Industrial Truck Dealer for further information. Specifications are subject to change without notice.

ERC-VG highlights/options



	ERC-VG
Ergonomic options	
Accutouch e-Hydraulic Mini-levers with thumb directional control	Opt
Foot Directional Control Pedal	Opt
Telescoping Steer Column with Tilt Memory	Opt
Return to Set Tilt	Opt
Full suspension seat in cloth or vinyl	Opt
Side battery removal with battery rollers	Opt
Operator's compartment dome light	Opt
Reverse drive handle with horn	Opt
Automatic Park Brake	Opt

	ERC-VG
Service highlights	
Easy service access	Std
Intellix VSM (Vehicle Systems Manager)	Std
Advanced on-board diagnostics and truck set-up using display	Std
Fully integrated CANbus control	Std
Advanced Thermal Management System	Std
Brushless AC Traction and Hydraulic Motors	Std
Flush-faced mast channels	Std
Three degree angle canted load rollers	Std
Hard chrome plated hoist cylinder rods	Std
Self adjusting brakes with improved life due to Auto Deceleration System	Std
PC Interface	Std
500 hour service intervals	Std
Removable floor side plates	Std

	ERC-VG
Service options	
Side battery removal	Opt
Full LED Light Package	Opt
Hydraulic System Monitoring	Opt
Impact Monitor	Opt
Attachment Extension Tubes (with/without Quick Disconnect Fittings)	Opt

	ERC-VG
Cost of Ownership highlights	
Auto Deceleration & Regenerative Braking	Std
Electronic Systems Monitoring	Std
Extended Shift	Std
Brushless AC Traction and Hydraulic Motors	Std
Transistor Controlled Hydraulics	Std
Power Assisted Braking	Std
Advanced Thermal Management System	Std
Electronic Horn	Std

	ERC-VG
Cost of Ownership options	
Accumulator	Opt
Full LED Light Package	Opt
Type "EE" UL construction	Opt
Impact Monitor	Opt
Load Weight Indicator	Opt
Hydraulic System Monitoring	Opt
Attachment Carriage	Opt
Operator Daily Checklist	Opt

Note: Std = Standard, Opt = Optional

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**Sales • Rentals • Financing • Fleet Management
Parts • Service • Operator Training**



Manufactured in our ISO 9001 and ISO 14001 Registered Facilities

Yale 

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