

NR-NDR

030-045EA

AGPOWER



**QUADRA-FLEX
OPERATOR
COMPARTMENT**

Truck shown with optional equipment

Narrow Aisle Trucks 3,000 - 4,500 lbs.

Yale 
People. Products. Productivity.

NR-NDR **Series**



Truck shown with EE option

As a leader in materials handling, Yale® offers so much more than the most complete line of lift trucks. Yale has invested heavily in people, processes and capital equipment to encompass the cornerstones of quality and dependability... **Innovative Design, Comprehensive Testing, Highest Quality, Advanced Components and Superior Manufacturing.**

When it comes to Narrow Aisle lift trucks, the NR-EA and NDR-EA are extremely versatile, combining the latest AC motor control technology with improved all-around performance and superb operator comfort to effectively meet the demands of high density warehousing.

All trucks shown with optional equipment



Yale NR035-045EA/NDR030-035EA
A true solution.

NR-NDR Dependability

The Yale® NR-EA and NDR-EA are designed and manufactured to be among the most dependable trucks in the industry today.

The **heavy-duty frame** uses thick steel plating for added strength. A fixed drive unit with spring loaded caster assembly allows for a smooth ride over uneven floors and offers improved capacity to height retention.

O-ring face seals are featured on all high-pressure hydraulic connections to reduce hydraulic leaks. A superior pressure side filtration system increases the life span of all hydraulic components.

The Yale **pantograph** is designed using finite element analysis for durability. Rear frame and inner arm weldments are reinforced for longer life.

Mast rigidity and improved capacity to height are part of the innovative mast design. Wear strips and brass wear plugs are designed to reduce wear and downtime.



Superior design



Mast rigidity

The Yale NR-EA and NDR-EA Series offers the most reliable parts program available in the industry. Yale dealers provide off-the-shelf availability of maintenance and repair parts routinely serviced in the first two years of truck operation.

Yale parts

Ultimate productivity

POWER
LOWERING



Truck shown with EE option

From their application proven rugged reach mechanism to their Hi-Vis mast, these trucks deliver state-of-the-art technologies that add up to reliable performance.

These trucks ride smoothly and are easy to operate. The **AC drive motor** delivers more power and the motor controller is mounted on finned aluminum heat sinks to provide cooling. Because every part is designed for strength, dependability and long wear, they're also on the job more—exactly where you want your trucks and operators to be.



AC motor controller

Power lowering increases operator productivity. When lowering unloaded, the motor "powers" the load down maximizing lowering speeds. **Regenerative lowering** increases battery shift life. When lowering with a load, the motor generates power through regenerative braking, putting energy back into the battery.

A variety of mast options make Yale® reach trucks adaptable to a wide range of applications. The **heavy-duty design** minimizes sway in high lift applications and lift cylinders provide integral cushioning for excellent mast channel staging. The cylinders and chains are placed behind the mast channels for protection and maximum visibility. The cantilevered overhead guard provides excellent visibility when spotting loads. The trunnion mounted design distributes the load forces to frame for smooth load transitions.

The NDR-EA and NR-EA utilize AC technology featuring an **Auto Deceleration System**. When activated, the truck electronically decelerates to a smooth stop when the operator moves the control handle towards neutral.

The **two speed reach/retract system** provides efficient load handling. Load cushioning is built into the extension and retraction cylinders to protect against load shock.

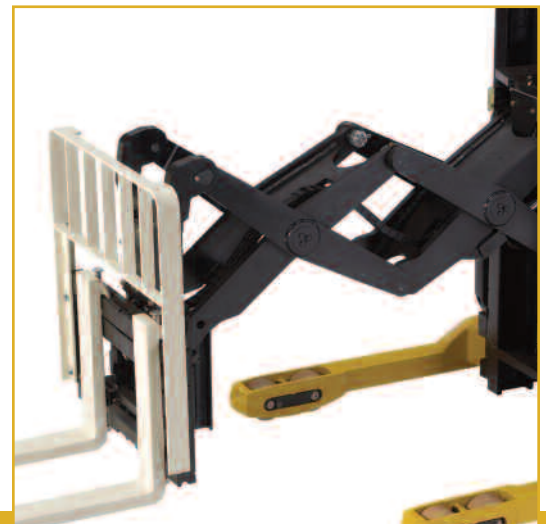
Dual tilt cylinders tilt the fork, carriage and load backrest together to provide better handling of product. Up to seven inches of total side shift enhances productivity. Side shift is standard on NDR-EA and optional on NR-EA models.



Power lowering



Auto Deceleration System



Electronically programmable pantograph

ultimate
performance

Intelligent ergonomics



Fore/Aft stance operation



Side-stance operation

Operators prefer our trucks. Applying best-in-class ergonomics, the Yale® NR-EA and NDR-EA offers a **Quadra-Flex Operator Compartment** with choice of Side-stance or Fore/Aft stance and different control handle configurations. An optional side-stance **Operator Comfort Package** provides vertical adjustment of lumbar back rest pad, horizontal adjustment of integral armrest and adjustable steering tiller positions for optimal comfort.

All trucks shown with optional equipment

The **side-stance** control handle provides conveniently located controls for forward/reverse, lift/lower, two speed reach/retract, tilt, horn and optional side shift. The control handle for side-stance operation allows simultaneous control of travel and hydraulic functions.

The **fore/aft stance** control handle provides conveniently located controls for forward/reverse, lift/lower, two speed reach/retract, tilt, horn, and optional side shift. An optional Aft Travel Control Handle with laser operator detection is available.

Both side-stance and fore/aft stance operation come standard with variable on-demand **electric power steering**. Steer tiller handle position is operator adjustable and steer effort is adjustable by a technician to reduce operator fatigue. Drive tire centers automatically at start-up.

The **large E-Z Ride floor** provides room for movement and has no pedal to step over. The full 5/8" thick deep cushioned floor mat and floorplate rides on elastomeric mounts, cushioning the ride to reduce operator fatigue. The 9.5" step height, flush mounted switches are properly positioned for operator comfort. The unique "step-up" brake allows the operator to enter and exit the compartment easily.

The **optional rear operator's compartment door** is intended to protect the operator from objects that may enter the operator's compartment but they may also slow the operator's egress in emergency situations. A review of the forklift's intended environment should be conducted before selecting a door as optional equipment.



Side-stance control handle with optional premium display (Inset Photo: standard display)



Fore/Aft Stance controls shown with optional Aft Travel Control Handle (Inset Photo: Laser beam operator presence sensor on Aft Travel Control Handle)



Optional rear door



E-Z Ride floor with elastomeric mounts

innovative
design

Yale[®] gold service

Not only are the NR-EA and NDR-EA designed to require less maintenance, they're also designed to be extremely easy to service. From the use of the heavy-duty brake system that reduces the number of serviceable parts, to numbered wiring for easy trouble-shooting, to onboard diagnostics, these trucks were designed with the smallest service details in mind.



All trucks shown with optional equipment



Easy to service

AC motors and controllers offer reduced maintenance through the elimination of motor brushes and the commutator. More efficient than DC motors and controls, AC technology eliminates arcing, sparking and brush dust.

The **stationary drive motor** eliminates cable flexing during steering. Employing digital technology, the **CANbus controller** enables the truck's systems to simultaneously communicate with each other from one central location, providing function-monitoring and diagnostic capabilities. In addition, the CANbus controller reduces wiring by 40% and electrical connections by 25%, resulting in improved reliability and improved visibility through the mast.

Two **dash displays** are offered with the truck, the standard display and the premium display. The standard display provides status, warning, and fault messages to the operator. The display has input for operators to change drive mode from rabbit through turtle. It also provides setup and diagnostic menus for service technicians. Hour meters for truck, traction, hoist, and auxiliary systems are also accessible through the menus. The optional premium display has all the same features as the standard display. In addition, the display provides larger text output, an integrated operator checklist, operator password and maintenance reminder.

Brass wear plugs allow periodic adjustments without mast disassembly. **Wear strips** keep the channel properly aligned reducing maintenance and providing greater uptime.



AC motors



Standard dash display
(Inset Photo: optional premium display)



Adjustable brass wear plugs

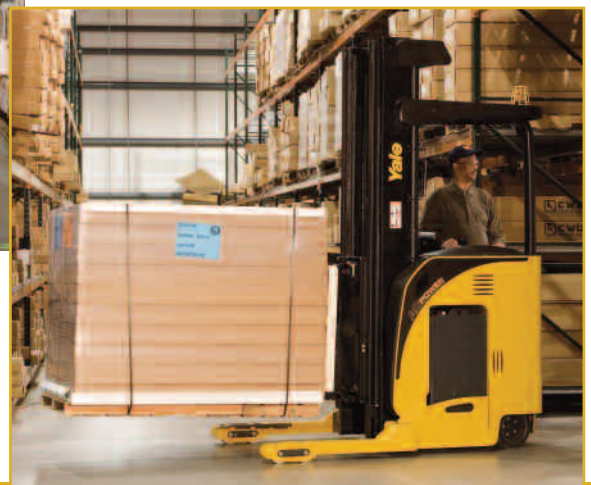
Low **cost of ownership**



A lift truck's cost of ownership is the largest portion of dollars spent and includes such elements as periodic maintenance, unscheduled repairs, load wheels, tires, brakes and power costs.

The superior design of the Yale® reach truck have helped lower the operating cost of the NR/NDR-EA. Extended maintenance intervals, longer brake and tire life all play a part in lowering the overall operating costs.

All trucks shown with optional equipment



The spring loaded **caster assembly** allows the vehicle to maintain drive wheel contact with ground over floor cracks or uneven floors. The caster assembly uses **dual articulating wheels**. Dual articulating wheels maintain ground contact with both wheels for even tire wear and to minimize tire scrubbing when pivoting. Free spinning caster is standard and an optional steered caster is available.



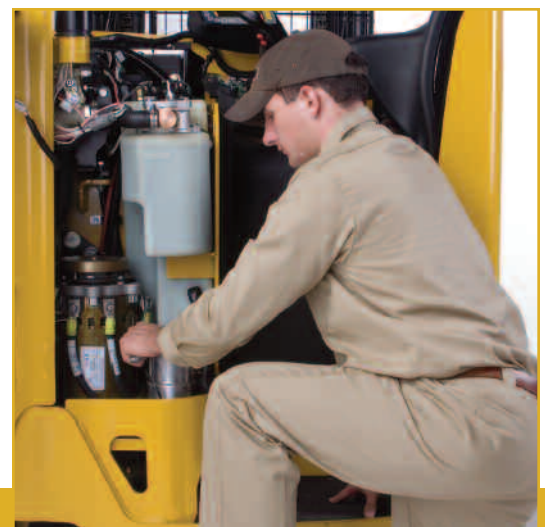
Spring loaded caster assembly
(Inset Photo: optional steered caster)

The **toe-end box outer side-plates** are flush-mounted, reducing truck and rack catch points. The tapered toe castings are available with blunt or tapered toe, providing a strong impact resistant welded front end. Bolt-on toe boxes are only offered with tapered toe and are available on select models. Load wheels are available standard with permanently lubricated bearings or optionally with greasable bearings.



Standard weld-on toe box with blunt toe

Commutating brushes are eliminated with the use of the **AC traction and hoist motors**. The brushless design of the traction, hoist, and steer motors provides improved reliability and maintenance intervals.



Extended maintenance intervals

intelligent
investment

NR035-045EA/NDR030-035EA **choices**



NR035-045EA/NDR030-035EA **versatility**

The NDR-EA and NR-EA Series is available in various configurations to meet and exceed your materials handling application requirements.

Operator Compartment	Reach Mechanism	Masts
Fore/aft Stance Operation	24" Single Reach (3,500, 4,000 or 4,500 lb. capacity)	5.5" 3-Stage Yale Hi-Vis Mast
Side-stance Operation	42" Double Reach (3,000 & 3,500 lb. capacity)	5.5" Heavy Duty 3-Stage Yale Hi-Vis Mast 6.9" 3-Stage Yale Hi-Vis Mast

NR035-045EA/NDR030-035EA **highlights/options**



Dependability **highlights**

	NR/NDR-EA
AC traction system	Std
AC hoist system	Std
O-ring face seal hydraulic fittings	Std
CANbus	Std
CANbus multifunction control handle	Std
Sealed electrical connections	Std
Proportional Valve Elimination	Std
Regenerative lowering	Std
Thermal protection of motors and controllers	Std
Radial thrust bearings on main pantograph pivot joints	Std
Pantograph Durability	Std
Rugged, stiff frame	Std
Stiff mast	Std
Full Danaher AC System	Std
Controller headroom (reserve capacity)	Std
Dedicated Auxiliary Pump/Motor	Std
Power wires on motor don't flex	Std
Sealed loadwheel bearings	Std

Dependability **options**

	NR/NDR-EA
Travel Speed Reduction with Carriage Extended	Opt

Productivity **highlights**

	NR/NDR-EA
Power lowering	Std
Thermal protection of motors and controllers	Std
Drive wheel automatically centers at start up	Std
Automatic brake operation	Std
Throttle braking	Std
Auto Deceleration System (Neutral braking)	Std
Variable plugging through regenerative braking	Std
Lift Limit	Std
Electric steer system	Std
Available 36 volt power supply	Std
Multi-function control handle with simultaneous operation	Std
Mast Rigidity	Std

NR035-045EA/NDR030-035EA **highlights/options**



Productivity **options**

	NR/NDR-EA
Camera	Opt
Load Weight Display	Opt
Fork Height Display	Opt
Auto Fork Leveling	Opt
Carry Position	Opt
Fork Laser Line	Opt
Steered caster	Opt
Integral sideshifter, 1.5" each way	Opt
Integral sideshifter, 3.5" each way	Opt
Integrated Shelf Height Selector System	Opt

Ergonomic **highlights**

	NR/NDR-EA
Low height of truck floor	Std
E-Z Ride floor	Std
Backrest comfort	Std
Positioning of steer handle / adjustable option	Std
Control layout	Std
Stability while turning	Std
Floor traction	Std
Ease of driving	Std

Ergonomic **options**

	NR/NDR-EA
Aft Travel Control Handle with laser operator presence detection	Opt
Work area light	Opt
Overhead fan	Opt
Comfort Package (storage bins, adjustable backrest, armrest and steer tiller position)	Opt
Keyless start	Opt

Service **highlights**

	NR/NDR-EA
Full diagnostics standard; power up, active, and test mode	Std
Bolt-on load wheels	Std
Fewer lube fittings	Std
CANBus	Std
AC Drive Motors and Controls	Std
AC Hoist Motors and Controls	Std
500 hour maintenance intervals	Std

Note: Std = Standard, Opt = Optional, N/A = Not Available

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.

NR035-045EA/NDR030-035EA **highlights/options**



Cost of Ownership **highlights**

	NR/NDR-EA
AC traction system	Std
AC hoist system	Std
Brushless steering, aux. motors	Std
Electric steering	Std
Regenerative lowering	Std
Electric brake	Std
Low number of contactors	Std
Dual articulating caster wheels	Std
500 hour PM intervals	Std

Cost of Ownership **options**

	NR/NDR-EA
Daily operator checklist reminder (Premium display)	Opt
Maintenance Reminder Feature (Premium display)	Opt
Sealed loadwheels	Opt

Note: Std = Standard, Opt = Optional, N/A = Not Available

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The Yale products included in this document may be covered by U.S. Patent 6,684,148 and other patents pending.

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



Manufactured in our own ISO 9001 and 14001 Registered Facilities



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