



# Yale<sup>®</sup> Robotics

# Transform into an efficiency machine with Yale® Robotics.

You experience the pain every day, escalating demand, pressure for faster delivery times and increasing challenges finding and retaining labor. With unemployment at a 50-year low and warehouse turnover over 40%, you face the costly, challenging cycle of hiring and training. This can result in significantly greater overhead, chipping away at your bottom line.

## What if you could automate repetitive picking tasks and free up workers to take on more valuable roles?

With Yale® Robotics, you can. When equipped with robotic technology, Yale® lift trucks are transformed into automated solutions, positioning you to:

- Reduce operating costs
- Increase operational efficiency
- Minimize damaged goods and accidents



# How does it work?

It's simple. By adding robotic technology to standard production chassis, we can transform a Yale® lift truck into a robotic lift truck to handle your horizontal and vertical transport needs, with smooth movement and controlled speed. Relying on structural features such as walls, building columns or racks, the technology self-locates and navigates loads throughout your operation with ease, optimizing workflow.

Whether you want to manage a single truck or an entire fleet, Yale® Robotics has the flexibility to meet your operational demands. Additionally, they can interface with a range of operating systems, providing greater visibility to load movement for increased accuracy and efficiency.

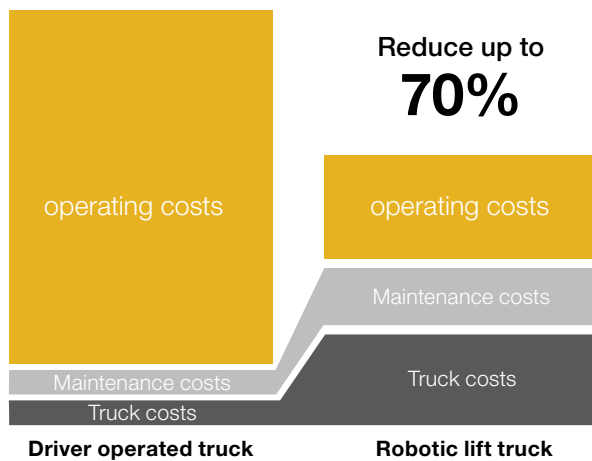


# Realize the benefits.

With finding and retaining lift truck operators a challenging and expensive proposition, let robotics provide relief by taking on routine and repetitive tasks. Utilizing vertical or horizontal placement, robotic lift trucks can pick up, transport and drop off pallets independently and reliably, improving your bottom line.

## Reduce operating costs up to 70%

Not only can robotics help lower operating costs by improving labor productivity and reducing product damages and accidents, but will enhance the flow of your materials handling operation, ultimately increasing customer satisfaction.



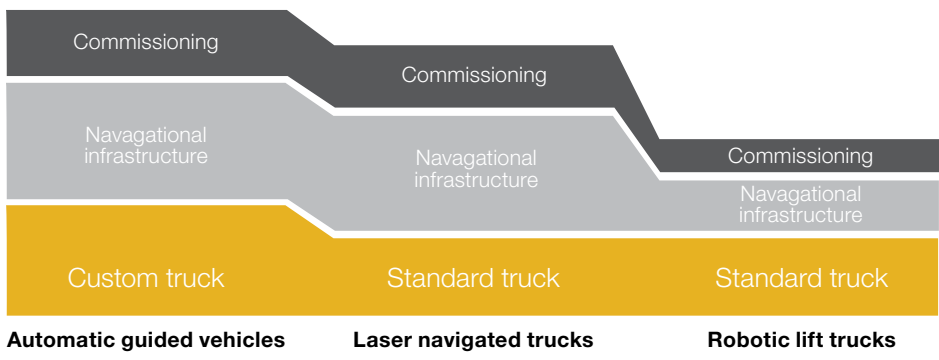
**Achieve cobotics**

With people and machines working side-by-side you can achieve a “cobotics” environment to enhance labor productivity, optimize workflow and help increase your bottom line.



## Improve your cost structure

When compared to automatic guided vehicles and laser navigated trucks, robotic lift trucks just make sense. You not only start off with a standard truck, which costs less, but navigational infrastructure and commissioning/start-up costs are much lower. See for yourself.





# Flexibility at its finest.

With robotic lift trucks you can achieve scalable automation, covering a range of applications from low-level order picking to high-bay retrieval and storage. This provides the flexibility required to accommodate peak demand and the constantly shifting traffic patterns in your operations.

## **Navigation without infrastructure** -

The robotic lift truck navigation system integrates easily into existing operations by mapping the physical structures and quickly accommodating changes in the environment. Creating and modifying driving paths is fast and simple.

**Real-time interaction** - By using a map of the environment, robotic lift trucks can locate themselves in real-time by comparing what the navigation laser detects with the reference map. This allows it to perceive and interact in real-time with its environment, making decisions autonomously.

**Automatic or manual control** - If you need to switch from automatic to manual control, you can. With the touch of a button, or by moving the tiller, the truck goes into manual mode, allowing an operator to take control and perform other tasks as needed.

## **Robot management and interface** -

The robotic lift truck manager software provides overall management of robotic lift trucks in real-time. It controls traffic, assigns transport orders to individual robotic lift trucks and interfaces with systems such as ERP (Enterprise Resource Planning) and WMS (Warehouse Management System), or equipment such as automatic doors, conveyors and production machines.



# Yale® robotic lift truck choices.



## End rider

Yale® MPE080-VG

- Transport single or double pallets
- Handle loads to marshalling/staging areas
- Easily transfer over long distances
- Bar code scanner confirms appropriate pallet

## Tow tractor

Yale® MO70T

- Standard trailer handling configurations
- Sequencing in assembly operations
- Kitting separate items to be supplied as one unit
- Stock replenishment and material hauling



## Counterbalanced stacker

Yale® MC10-15



- Deposit or remove pallets from 2nd or 3rd level
- Handle smaller width pallets
- Stack or unstack loads
- Deposit or remove pallet from shrink wrap station

## Robotic reach

Yale® NDR035EB

- Double-deep reach capabilities
- Deposit or remove pallets from as high as 30 feet
- Maximize vertical storage space
- Ideal fit for distribution centers



For more information, or to find your nearest Yale® dealer, go to [Yale.com](http://Yale.com).



**YALE MATERIALS HANDLING CORPORATION**

P.O. Box 7367, Greenville, NC 27835-7367

[www.yale.com](http://www.yale.com)

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Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale® Industrial Truck Dealer if any of the information shown is critical to your application. Specifications are subject to change without notice. CERTIFICATION: Yale lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. Classified by Underwriters' Laboratories, Inc., as to fire and electric shock hazard only for Type E industrial trucks.

Manufactured in our own ISO 9001 and 14001 Registered Facilities

2545g 2/2020 All trucks shown with optional equipment.