

# AUTOMATED GUIDED VEHICLES

RAYMOND COURIER™

**RAYMOND**



# BUILT TO PERFORM. DESIGNED TO WORK TOGETHER.

For 95+ years, The Raymond Corporation has built a reputation based on top-notch quality, reliability, and exceptional customer service.

We design and build the best lift trucks in the business. We provide technologies, systems, and solutions that bring day-to-day warehouse and distribution operations to a new level of performance. And we support customers with a network of skilled service centers and technicians unmatched in the industry.

From our eco-efficient trucks and telematics to our warehouse optimization and flexible financing, Raymond's big-picture approach and precisely targeted solutions are designed to adapt and grow with your business.

Our innovations in energy savings, space utilization, ergonomics, manufacturing quality, and fleet optimization—combined with our best-in-class products and services—work together to increase efficiency and lower costs throughout your material handling operations.

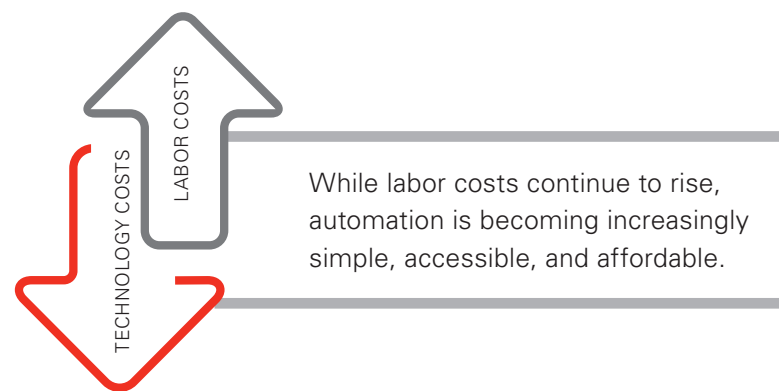
Raymond stands ready to help you run better and manage smarter—end to end.



# AUTOMATING A SOLUTION FOR TODAY'S LABOR CHALLENGES

From skilled to reliable, permanent or seasonal, labor is becoming increasingly hard to find and difficult to afford. Automation is becoming an inevitable and invaluable option for warehousing, manufacturing, and distribution operations. Machine power is augmenting manpower in an effort to keep goods moving, keep workers happy, and keep costs down.

Automated Guided Vehicles (AGVs) like the Raymond® Courier offer a cost-effective solution for today's labor challenges by efficiently and reliably performing a variety of repetitive transportation and pallet handling tasks.



## RAYMOND AUTOMATED GUIDED VEHICLES

Optimize your allocation of resources with a series of Raymond Courier™ trucks that offer a range of automated capabilities and efficiencies.

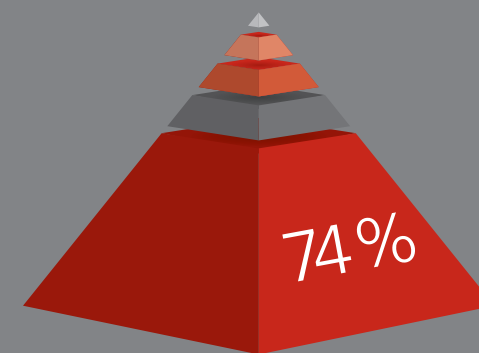


COURIER 3020  
AUTOMATED  
TOW TRACTOR  
*with optional  
Low Clearance Arch*

COURIER 3010  
AUTOMATED  
CENTER RIDER

COURIER 3020  
AUTOMATED  
TOW TRACTOR

COURIER 3030  
AUTOMATED  
STACKER



With labor accounting for 74% of a lift truck's operating costs, automated solutions like the Raymond Courier offer dramatic cost savings opportunities, fast payback, and a low total cost of ownership.

## COLLABORATIVE AUTOMATION

### FOR MORE ENGAGED & PRODUCTIVE EMPLOYEES

By freeing operators from repetitive, low-value tasks, Raymond Couriers can create a more rewarding work environment, raising engagement and lowering turnover.

- + Share responsibilities between man and machine to enhance productivity and overcome specific business challenges.
- + Transform skill sets by focusing on advanced knowledge tasks.
- + Empower employees by allowing them to manage the equipment now performing the manual tasks they once did.
- + Reduce physical fatigue by relieving operators of long-haul applications.

LESS THAN  
2 YEARS  
INDUSTRY-LEADING ROI

# RAYMOND COURIER— FLEXIBILITY, SIMPLICITY, AND A FAST RETURN ON INVESTMENT

No matter where you are in the process of adopting automation, the Raymond Courier offers an easy-to-implement, vision guided solution requiring no changes to your facility or interruption to your workflow.

Operational from day one and easily programmed and reprogrammed internally for exceptional flexibility and scalability, Raymond Courier delivers fast payback and low total cost of ownership.

## LOWER TOTAL COST OF OWNERSHIP—HOW IT ALL ADDS UP



+ **easy implementation**  
*with no infrastructure changes or business interruptions*

+ **short commissioning time**  
*with ease of setup, the truck can be operational from day 1*

+ **superior flexibility and productivity**  
*with manual or automated operation, and one employee able to manage multiple trucks*

+ **simple to use**  
*with an intuitive operator interface that allows for quick, easy route teaching and truck dispatching*

+ **ongoing scalability**  
*with routes that can be quickly transferred between trucks for quick redeployment to different facilities, locations, shifts or applications*



## LEARN THE ROPES. REAP THE REWARDS.

Raymond makes it easy to integrate Raymond Courier trucks into your operation, giving you the long-term tools to work efficiently, productively, and collaboratively with labor.

Raymond:

+ delivers your trucks & provides ongoing service and support

+ programs your routes

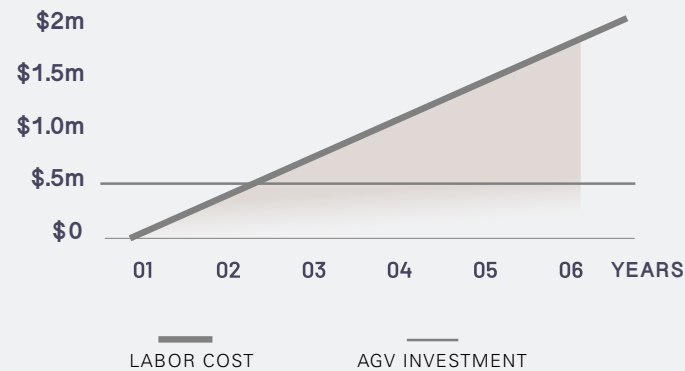
+ trains operators how to program and reprogram your trucks

# A CASE FOR THE RAYMOND COURIER

PURCHASING, PRODUCTIVITY AND PAYBACK VS. THE COST OF DOING NOTHING

Sample Application\*: Finished goods moving from manufacturing into short- and long-term storage.

By enhancing efficiency and reliability, and allowing you to redeploy personnel to optimize productivity, Raymond Courier trucks offer an immediate impact on your bottom line and a fast payback—in this case, under 18 months.



## RAYMOND COURIER

Courier	3
Total Estimated Cost Installed*	\$533,473

## LABOR

Fully Burdened Annual Wage	\$53,591 per Full Time Employee (FTE)
FTEs per Shift	3
Number of Shifts	2

VARIABLES	Absentee Replacement Operator (ARO) %	5% per year
	New Employee Startup Cost	8% per year
	Annual MH Employee Turnover %	30%

## FINANCIALS

	3 year	4 year	5 year
IRR	47%	58%	63%
NPV	\$347,973	\$590,554	\$817,477
ROI	108%	181%	256%
<b>NET CUMULATIVE SAVINGS ▶</b>	<b>\$573,834</b>	<b>\$964,513</b>	<b>\$1,366,523</b>

## PAYBACK

Payback Period	17.5 months
FTEs Redeployed	6
Cost of not automating this project	-\$5,256 per month

\*Figures shown are representative of one customer's particular application. Actual numbers, savings, and payback time for your specific location and application may be more or less.

+ LOW TOTAL COST OF OWNERSHIP  
 Pricing shown for the Raymond Courier is all-inclusive, so there are none of the additional fees charged by other manufacturers for services such as:

- + Application/installation engineering
- + Post-sale support
- + Product retraining/new routes
- + Product implementation
- + Product training
- + Product demonstrations



# ENGINEERED TO TAKE A LOAD OFF YOUR MIND

Raymond Courier trucks work collaboratively and in tandem with each other, side by side with your operators, and hand in hand with your conveyors, forklifts, and other equipment.

From horizontal load transport to vertical pallet handling, simple cross-docking to more involved workflows, Raymond Courier offers the capabilities to seamlessly and reliably automate a variety of tasks in warehousing, distribution, and manufacturing operations.

## IDEAL ENVIRONMENTS & APPLICATIONS

### WAREHOUSING/DISTRIBUTION/3PL

Inbound Receiving to Storage  
Picking to Outbound/Packaging  
Long Haul Transfers to Other  
Storage Locations

### Types of Warehouses:

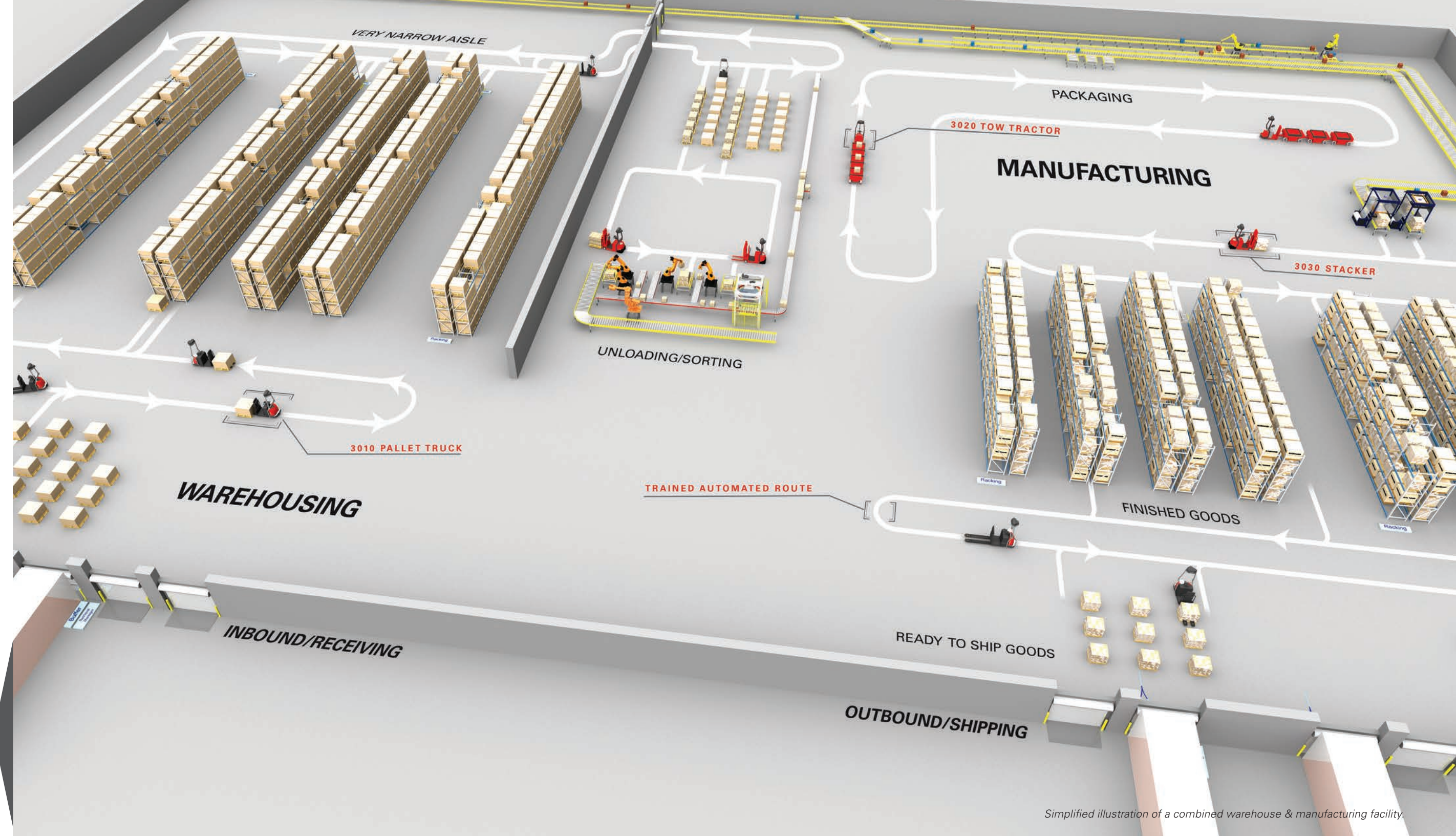
*Consolidation Warehouses / Cross-Dock Distribution  
Centers / Break-Bulk Warehouses /  
Mixing/Order-Assembly / Distribution Facilities*

### MANUFACTURING

Kitting Transfers  
Parts-to-Line  
End-of-Line to Stock or Dock  
Finished Goods  
Inbound Putaway

### IDEAL MARKETS

Distribution  
Food + Beverage  
Aerospace  
Consumer  
Automotive



*Simplified illustration of a combined warehouse & manufacturing facility.*

# CHOOSING THE PERFECT PLATFORM

Designed to operate on their own and handle a variety of functions, Raymond Courier trucks enhance reliability, consistency, and efficiency at all phases of your operation. From inbound to outbound, each model can automate specific applications to address the unique needs of your business.

## SPECIFICATIONS (ALL MODELS)

Battery Voltage: 24 volts  
Floor to Top of Vision Guidance Unit: 90.2"



# 3030

## COURIER 3030 AUTOMATED STACKER

Horizontal transport and vertical pallet handling capability; versatile option ideal for pick-up and drop-off, end-of-aisle, end-of-line and conveyor picking applications

- + Reverse motion and obstruction sensor
- + Auto pallet engagement
- + ITA fork design
- + Capacity: 2,500 lbs.
- + 72" Elevated Height

# 3010

## COURIER 3010 AUTOMATED PALLET TRUCK

Horizontal transport; ideal for transporting pallets over long hauls, for put-aways, cross-docking and load staging applications

- + Reverse motion and obstruction sensor
- + Auto pallet engagement and drop-off
- + Universal tapered forks
- + Single and double fork lengths available
- + Capacity: 8,000 lbs.



# 3020

## COURIER 3020 AUTOMATED TOW TRACTOR

Horizontal transport; ideal for pulling cart or trailer loads in batch picking, parts-to-line and end-of-line (automated conveyor cart) applications

- + Automatic unhitch capability with dual slots for hitch height adjustment
- + Low Clearance Arch model available for restricted-height areas down to 66"
- + Capacity: 10,000 lbs.



		3030	3020	3010	
WAREHOUSING	INBOUND	Staging to Putaway (floor to rack storage up to 72")	x		
		Staging to Pick & Drop Location	x		x
		Crossdock (staging to staging)	x	x	x
	MATERIAL MOVEMENT	Pallets from Pick & Drop to Outbound Staging	x		x
		Trash/Dunnage Transport	x	x	
	OUTBOUND	Pallet Picking (floor to rack storage up to 72")	x		
Layer Picking to Outbound Staging		x			
Order Pallets/Carts to Pack-Out		x	x	x	
Pallets to Wrapper / Wrapper to Outbound Staging		x			
MANUFACTURING	INBOUND	Staging to Putaway (floor to rack storage up to 72")	x		
		Staging to Pick & Drop Location	x		x
	MATERIAL MOVEMENT	Kitted Parts-to-Line		x	
		Bulk Parts-to-Line	x	x	x
		Small Parts-to-Line		x	
		Sub-Assembly to Assembly Line		x	
		Empty Container Management	x	x	x
Trash/Dunnage Transport	x	x	x		
OUTBOUND	Finished Goods to Warehouse	x	x	x	
	Finished Goods to Outbound	x	x	x	

# OPTIMIZATION BEFORE AUTOMATION

The era of automation is here, ready to keep your business productive and competitive. But organizations need to rethink before they retool. Automation takes preparation.

Prior to the introduction of any sort of automated system, your warehouse and processes should first be analyzed and optimized by evaluating different aspects of your operation, including:

LABOR UTILIZATION AND  
OPERATOR PRODUCTIVITY:

*Is your labor force not meeting escalating demands primarily due to limited capacity?*

*Or, is your labor force's capacity being diminished by performing non-value added or redundant tasks?*

SIZE AND TYPE OF YOUR  
LIFT TRUCK FLEET:

*Is the velocity of your warehouse being impacted by using the incorrect type of powered industrial equipment to move product?*

*Are your fleet maintenance costs inflated by prematurely servicing under-utilized "spare," "just-in-case" vehicles?*

TRAFFIC PATTERNS AND  
BOTTLENECKS IN YOUR  
WORKFLOW:

*Are your current work and traffic flows very dynamic or even random which can cause congestion or inefficient routes?*



## GET MORE OUT OF YOUR WORKSPACE, WORKFLOW, AND WORKFORCE

While automating may be intimidating, Raymond can simplify your adoption and implementation with an array of professional teams and tailored technologies, including:

- + Experienced consulting services, application engineers, and automation systems experts
- + Integrated system solutions including automated guided vehicles, storage and retrieval systems, and semi-automated operator navigation systems
- + The industry's most comprehensive telematics offering data and insights to measure where you stand

# CONTROL YOUR TRUCKS— AND YOUR BUSINESS

Any automated system is only as good as the software behind it. And Raymond Courier offers three platforms designed to do everything from controlling your trucks to helping you manage your operation and make more informed decisions:

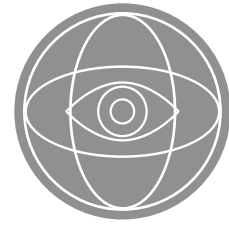
## VISION GUIDED TECHNOLOGY

## SUPERVISOR SOFTWARE

## iWAREHOUSE®

2  
MILLION+

Miles logged to date worldwide using Seegrid Vision Guided Technology without incident.

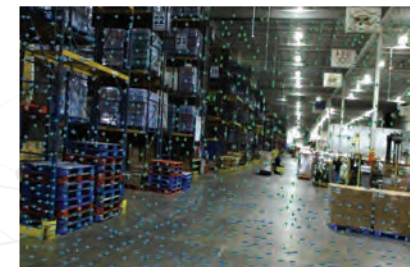


### VISION GUIDED TECHNOLOGY— FOR RELIABLE, PREDICTABLE NAVIGATION

Raymond Courier trucks can operate on their own in virtually any warehouse environment thanks to a powerful, flexible, reliable vision guided system.

Engineered by Seegrid, a pioneer and market leader in 3D vision navigation, and based on evidence grid technology, the system uses a series of truck-mounted cameras and sensors to provide a 360° view of your environment. Rich, contextual information allows the trucks to work by recognizing locations, identifying obstructions, and controlling behaviors.

GRAPHICAL REPRESENTATION

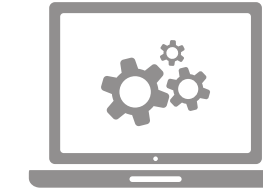


VISION

VS.



LASER



### SUPERVISOR SOFTWARE— FOR WEB-BASED CONTROL OF YOUR TRUCKS

Supervisor Software lets you monitor your Raymond Courier trucks from any web-enabled computer or mobile device—anywhere, anytime—with real-time status updates.

#### FLEET STATUS

Provides real-time updates on truck locations and status for easy tracking and monitoring.

#### INTERSECTION MANAGER

Controls traffic by granting or withholding access requests from individual trucks for optimum flow throughout your operation.

#### SWITCHBOARD

Allows easy programming with PLC integration, customizable commands, rules, and notifications to tailor the system to your needs.

#### SUBWAY PLATFORM

Displays an estimated time of arrival at pick-up and drop-off points for more timely and efficient operator/truck interactions.



iWAREHOUSE gives you the tools to make data-driven decisions to enhance the efficiency and productivity of your equipment, facilities, and labor.

### iWAREHOUSE FLEET MANAGEMENT AND WAREHOUSE OPTIMIZATION SYSTEM (OPTIONAL)

The industry's most comprehensive and scalable telematics platform, iWAREHOUSE Evolution™ gives you deeper insights into your operation by working with all the trucks in your fleet—Raymond or non, automated or manual—to help you identify operator inefficiencies, determine opportunities, and optimize fleet and labor productivity.

Adding this option to the capabilities of Supervisor Software gives you a more complete and holistic view of your overall business.

Regularly updated and trusted by operations worldwide, iWAREHOUSE offers the data, analysis, and reporting functions you need to make the most of the Raymond Courier, future automation investments, and a shrinking labor force.

# FROM FLEET TO FINANCE, WE HAVE YOU COVERED

+ Trucks and Training

+ Fleet Maintenance and Parts

+ Warehouse Optimization System

+ Certified, Pre-owned Lift Trucks and Rentals

+ Industry Leading Warranties

+ Flexible Financing Solutions

From initial consultation to custom-designed solutions to long-term product and operational support—and with a network of more than 100 Sales and Service Centers—Raymond provides unmatched, world-class support tailored to meet your needs, help you drive down costs and run your business better and smarter.



## + warranty coverage

*Raymond Asset Protection™ is Raymond's industry-leading warranty that begins with a Standard Warranty—coverage that starts the moment the new truck arrives at your facility.\* Additional coverage options are available; select the option that fits your fleet so you can maximize performance while locking in affordable, predictable service costs.*

\*For complete details, refer to the Raymond Standard Warranty.



## + maintenance

*Designed to fit your budget, Raymond offers three plans specific to your needs which you can tailor for individual trucks or entire fleets: contract maintenance, comprehensive fixed-price maintenance and scheduled maintenance audit.*



## + expert technicians

*For those customers who have lift truck technicians on-site, Raymond offers Customer Technician Courses. Training is available at Raymond headquarters, at your facility or your local Raymond authorized Sales and Service Center.*



## + parts

*Raymond Parts™ is the industry's most comprehensive one-stop shop for world-class lift truck parts. Raymond is committed to meet all your parts and supply needs, regardless of the make or model of the truck. We sell only the highest quality parts that meet or exceed OEM quality standards.*



## + financing

*For an outstanding and flexible Raymond equipment solution, your Raymond Sales and Service Center and Raymond Leasing Corporation deliver what your business needs—the equipment you need to grow, at fixed costs. Raymond offers low ownership interest rates and variety of affordable and flexible lease options.*



## + pre-owned lift trucks

*Raymond RENEWED™ offers certified, pre-owned electric lift trucks that have undergone a rigorous quality inspection and reconditioned with genuine OEM parts from top to bottom. Every truck is delivered with full warranty coverage.*



## + iTRACK®

*The iTRACK Asset and Cost Management System helps to reduce your overall cost of ownership. It provides accurate, actionable maintenance data and reports—from individual assets, to a fleet at a single location, or across your entire enterprise. iTRACK is your anytime, anywhere web-based asset management system.*



## + rentals

*A Raymond rental is the smart and economical solution to meet your interim material handling needs—whether you are looking for seasonal rentals, unplanned peaks in activity, replacing trucks for scheduled repairs or waiting for delivery of new equipment. Or, if you just want to establish the value of the equipment before purchasing or leasing.*



## + iWAREHOUSE®

*iWAREHOUSE delivers the industry's most comprehensive and scalable fleet telematics solution. From battery monitoring and impact management to vehicle and operator utilization, electronic checklists, labor management and professional services – iWAREHOUSE gives you all the tools and insights you need to run more efficiently, reliably and profitably.*



## + training

*Studies have shown that effective operator training can help improve how your operation runs. Designed to help you protect your people, equipment and materials, Safety on the Move® can assist in satisfying the OSHA mandate to train your operators.*

# RUN BETTER. MANAGE SMARTER.

At Raymond, our aim is to deliver the utmost quality and to work for continuous improvement every day, in every aspect of our business. We are proud of what we build. We are proud of the level of service we provide to keep our customers' business up and running. We take pride in our commitment to our customers through our end-to-end approach in helping them find smarter, more efficient, and more effective solutions.

We value the trust that Raymond has earned through decades of proven performance and hands-on innovation. Since the patenting of the first hand-pallet truck to the invention of the reach truck to our pioneering work in narrow aisle operations and beyond, Raymond has led the way in providing customers with the tools and expertise to improve their business.

IF YOU'RE LOOKING FOR A PARTNER WITH THE TOOLS AND EXPERIENCE TO HELP YOU RUN BETTER AND MANAGE SMARTER, LET'S TALK.

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

Due to continuous product improvements, specifications are subject to change without notice. Some systems and features shown are optional at extra cost. ACR System, Raymond, Safety on the Move, Steps to Safety, Raymond Asset Protection, Raymond RENEWED, Raymond Parts, Raymond Courier, iTRACK and iWAREHOUSE are U.S. trademarks of The Raymond Corporation.

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