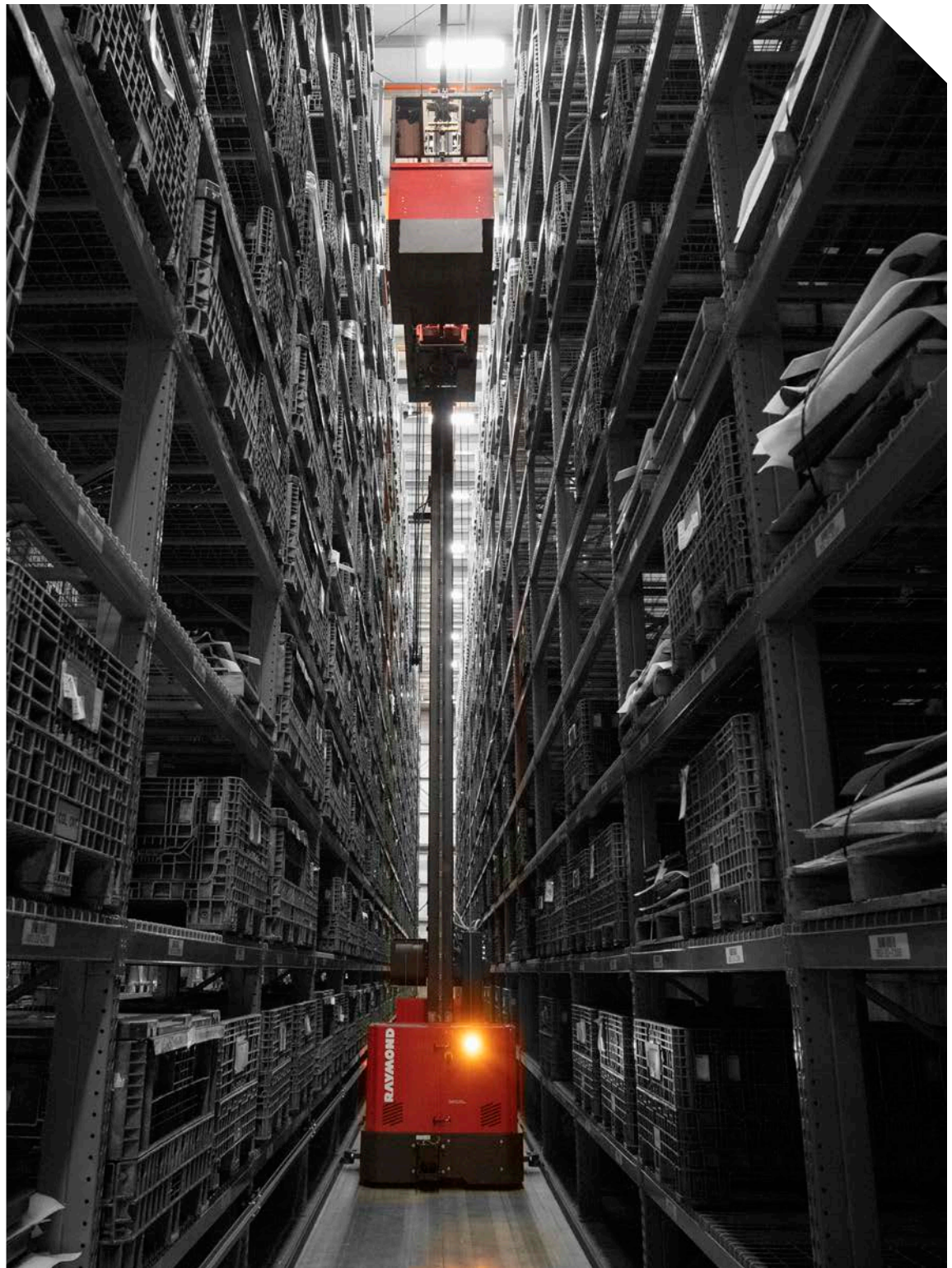


AUTOMATED TRANSTACKER

RAYMOND



REDUCE LABOR COSTS AND MOVE MORE PRODUCT

With its very narrow aisle (VNA) design and dual-application versatility—full pallet handling and case picking—Raymond’s unique Transtacker (TRT) has always been the ultimate solution for high-density, high-selectivity storage environments. And now it’s even better than ever.

To address today’s labor constraints and costs, we’ve automated the truck, making it a dual-mode (operator on/off) solution that combines the space and labor-saving benefits of AS/RS systems with the flexibility to change aisles when needed.

AUTOMATION ADVANTAGE:

SAME SPEEDS AND PERFORMANCE AS MANUAL TRUCK	MORE PALLET MOVEMENTS	MORE EFFICIENT USE OF LABOR	SMARTER, GREENER SOLUTION
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BENEFITS OVER OTHER IN-AISLE AUTOMATED PALLET-HANDLING SYSTEMS

No special racking required—uses your existing infrastructure

Flexibility to move from aisle to aisle (with operator)

Offers both full pallet (manual and automated) and case picking (manual only) capabilities

Keeps running if communication systems go down

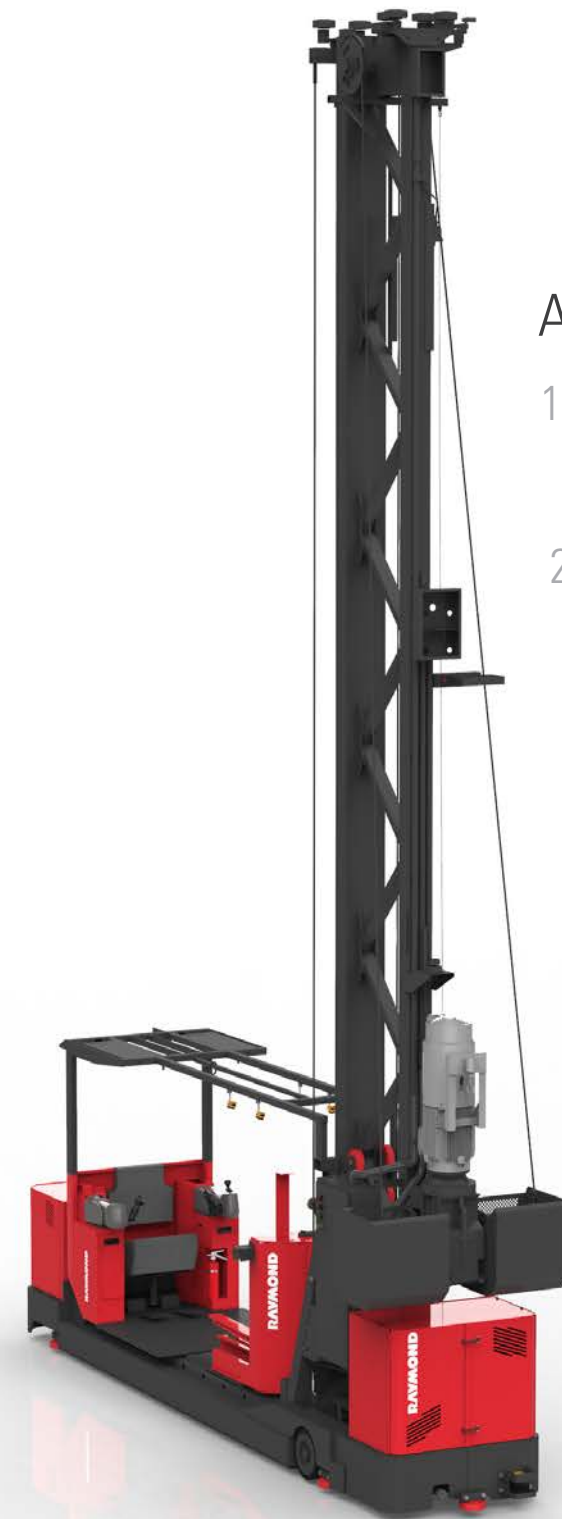
INCREASE PRODUCTIVITY AND MAXIMIZE YOUR ROI

The example below assumes the Automated TRT achieves 1.5 added hours of operation from the manual TRT with the elimination of breaks. This equates to more pallet movement. Labor can also be reallocated elsewhere, reducing your overall cost of labor in the automated aisle. More pallet movements at less cost maximizes your ROI.

	Automated	Manual
# of shifts	3	3
# of trucks per shift	3	3
# of operators	3	9
Annual cost of labor (53,591 FTE)	\$160,773	\$482,319
Productive hours per 8-hour shift	8	6.5
ANNUAL LABOR COST SAVINGS	\$321,546	
% INCREASE IN PALLETS PER MONTH	20%*	
MONTHLY INCREASE IN PALLETS MOVES	1,495**	

*Actual Deadman hours show 6.5 hrs (industry standard) per day vs. 8 available with automation. This equates to 23% increase in productivity/pallets per month. The above chart uses 20% to account for 3% downtime.

**Manual: 117 pallets moved per shift / 7,605 per month
Automated with 20% increase: 140 pallets moved per shift / 9,100 per month



AUTOMATED MODE—HOW IT WORKS

1. Operator places Automated TRT in aisle, sets Auto/Manual switch on truck to Auto, exits truck, and leaves the aisle.
2. Operator checks the aisle is clear of objects which can include personnel and places truck in automated mode on the off-board Human Machine Interface (HMI).
3. Pick/put locations are automatically downloaded from your WCS/WMS system to the truck via the Order Manager software.
4. Pick/put tasks are cached in the system, allowing the truck to “batch” movements and work more quickly and efficiently.
5. Sensors in the truck’s forks, bumpers, and operator compartment allow precise automated load handling and secure operation.
6. Light curtains at the end of the aisle automatically stop the truck if an object which can include a person is detected entering the area.

ORDER MANAGER SOFTWARE

The Automated TRT’s Order Manager software is an Integrated System Design (ISD) supplied and supported solution that fully integrates with your WMS to optimize performance and eliminate errors.

PRODUCTIVITY

- + Automated operation, with no need for operator breaks, means more hours on the floor and more pallets moved per shift
- + Capable of 24/7 operation with on-board battery charging
- + Pallet-handling speeds equal to manual Transtacker trucks
- + Faster, more precise traveling between locations
- + Streamlined processing times with WMS integration

QUALITY

- + Automatic WMS dispatches eliminate human error for faster, more accurate order processing

VERSATILITY/SCALABILITY

- + Dual mode operation—Automated mode for full pallet moves, plus the option to switch to manual mode for case picking
- + Ability to change aisles when needed in manual mode
- + Automated-ready manual truck provides a modular solution to upgrade when ready
- + Flexibility to work with and configure to your existing WMS

SUSTAINABILITY

- + Energy-efficient lithium-ion battery recharges during use and requires no changes
- + Fewer battery replacements with long-lasting lithium battery lessens environmental impact

EXPERT SUPPORT — FROM EVALUATION, IMPLEMENTATION TO POST IMPLEMENTATION

At Raymond, we'll assess your facility and application to ensure automation makes sense for your business—optimizing your facility, systems, and technologies before recommending any sort of solution.

Our team of consultants, application engineers, and automation systems experts is here to help with everything from an initial evaluation, to the development and

implementation of a flexible, scalable, tailored solution, and post implementation support.

And, when you need post implementation support, our local Solutions and Support Centers provide the same level of seamless and consistent service you would expect on any other piece of material handling equipment in your facility.

SPECIFICATIONS	Automated
Capacity:	3,000 pounds
Elevated height:	59 feet
Max. beam height:	700 inches
Min. aisle width:	54 inches
Speed:	Performance same in both manual and automated modes.
Ambient Temperature range:	42-110 degrees F
Power:	Utilizes AC and DC Power + Three-phase AC power is 480 VAC for U.S. + DC power is provided through a continuously charged battery while in the aisle or through the storage battery while out of the aisle and is used to power the travel function. The battery is 36VDC.
Automation mode:	The truck shall travel to its target destination with the following tolerances: + Horizontal: +/- 10 mm (.39 inches) + Vertical: +/- 3 mm (.12 inches) Automated full pallet handling on one shift with the flexibility to order picking in manual mode on another shift
	Automation applied to Fork Handlers only.

AUTOMATE WHENEVER YOU'RE READY

Whether because of budget limitations, facility readiness, or any other reason, not everyone is ready to fully invest in automation right away.

That's why today's Transtacker has been redesigned to be automation-ready—manufactured with the features needed to accommodate automation additions and changes down the road—providing you with a modular, manual truck now, and the ability to convert to automation later.

When you are ready, the following set of conversion packages will be available.

AUTOMATION PACKAGE – a base kit comprised of all necessary hardware and software.

INTEGRATION PACKAGE – everything you need, from site surveys to system commissioning, to successfully integrate automation into your application.

For more information or to see how the Automated Transtacker could help you maximize labor resources, streamline workflows, and drive down costs, please contact your local Solutions & Support Center.

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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