

Heavy-truck extraction that keeps the assembly line moving.

When a truck cannot leave the assembly line under its own power, every transfer matters. INOGECE developed a custom platform-type AGV for PACCAR / Peterbilt to lift and extract heavy trucks safely within a constrained factory layout.

PACCAR / PETERBILT



RTM-002 in operation · frame from the supplied project video

25,000 lb

LIFTING CAPACITY

RTM-002 · ≈11.34 t

2

NAVIGATION MODES

Autonomous and manual

100%

OMNIDIRECTIONAL

With freecaster dollies

CLIENT	PACCAR · Peterbilt
APPLICATION	End-of-line extraction
AGV	RTM-002

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THE CHALLENGE

A completed line. A truck that cannot drive out.

At the end of assembly, some trucks cannot move under their own power because of their assembly state or missing critical components. They still need to leave the line at production pace.

The handling solution had to manage heavy loads safely, maneuver in limited space, and provide the reliability needed to avoid an end-of-line bottleneck.

Traditional handling limited the flow.

The previous method used conventional forklifts with hoists and chains mounted on their forks. It introduced several constraints:

- **Restricted operator visibility during maneuvers**
- **Slow handling and limited positioning precision**
- **Greater operator exposure and several people needed for some tasks**
- **Difficulty keeping pace with production**

PROJECT OBJECTIVES

Extract trucks at production pace

Improve safety and reduce manual handling

Reduce the number of operators required

Standardize a reliable handling process

THE SOLUTION

A custom AGV built around the truck.

Five complementary elements combine lifting, controlled movement, and flexible operation in a platform-type architecture tailored to heavy trucks.

01

Purpose-built lifting

A U-shaped frame engages around the truck wheels. Flexible gripping accommodates front or rear tires depending on configuration, while integrated lifting supports stable, precise handling.

02

Omnidirectional motion

INOGE's omnidirectional technology enables lateral and diagonal travel and rotation in place, helping maneuver in confined areas and reduce aisle needs.

03

LIDAR safety

Safety LIDAR monitors the area around the equipment and load, with real-time obstacle detection and dynamic protective zones.

04

Autonomous or manual

BlueBotics navigation follows preprogrammed routes autonomously. Operator-controlled manual mode supports specific handling situations.

05

Custom freecaster dollies

Freecaster dollies support the opposite wheels so the complete truck can move 100% omnidirectionally, easing movement and storage in tight spaces.



Heavy-truck handling concept illustration

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 RESULTS

Faster extraction. Safer handling. A steadier flow.

The project case study reports improvements across the end-of-line handling process:



Production flow

Faster chassis extraction aligned with assembly-line pace, with fewer end-of-line bottlenecks.



Operator safety

Safer handling operations and fewer operators required to manage truck extraction.



Simpler maneuvers

Elimination of complex, low-visibility maneuvers and a more standardized, reliable process.



Space utilization

Omnidirectional movement helps make better use of constrained handling and storage areas.

A heavy or non-powered vehicle to move?

INOSEC adapts its AGV solutions to your mechanical constraints, production pace, and factory environment.

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