

➤ Revolutionary Garbage Truck Tested in Drummondville

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Inpak Vehicles, a company founded in April 2010, has developed an automated side loader garbage truck, equipped with an articulated arm, designed to maximize payload capacity and reduce energy use. Dubbed the Détritube, the vehicle has been called “revolutionary” by the industry!

The light weight of this future waste collection heavyweight has been making an impression from Drummondville to the United States. Made entirely of aluminium, the cylindrical body and its automated arm weigh two tonnes less than rectangular steel hoppers weighing six tonnes.

“This vehicle, the lightest in its class, can hold 30% more than its average competitor,” boast Jean and Clermont Fortin, co-owners of Inpak Vehicles.



➤ Automated arm designed by ITAQ

Gérard Bouffard, a mechanical engineer at the **Québec Advanced Transportation Institute (ITAQ)**, completely redesigned the robotic arm to make it more reliable, effective, lightweight and thus energy-efficient.

“One of the challenges was the horizontal operation of the arm, at 180°,” explains Mr. Bouffard. By creating a design that only requires a single actuator to horizontally grab a container and empty the contents into the hopper, it was possible to reduce maintenance needs and cut the cost of manufacturing the arm.

According to André Nadeau, President of Inpak Vehicles, the ITAQ was an ideal partner for this project. “The ITAQ began by thoroughly researching all the current regulations affecting waste collection vehicles in North America. This guaranteed that the vehicle would meet all standards, right from the very first design stages. Then, the ITAQ took on the design and 3D simulation of the arm. Finally, the Institute provided the mechanical design of the arm, carried out the prototyping and perfected its various components.”

Mr. Nadeau is delighted that most of the major industry players have already approached him about the product! □

* Results can vary depending on the type of vehicle.

➤ Put to the test

Tested by Cascades Recovery for a year, the Détritube has already won over the company: “The Détritube is practical, energy-efficient [consuming at least 20% less fuel*] and just as resistant as traditional steel hoppers,” according to Patrice Clerc, Supply and Services Manager.

