BOIVIN EVOLUTION

INTRODUCING THE FIRST 100% ELECTRIC

AUTOMATED ARM AND COLLECTION BODY

ZERO EMISSION

LOWER COST OF OWNERSHIP

LOWER MAINTENANCE

Fully automated side loader for **residential waste, recycling and organic** collection. The body is engineered to function with electric motors PMDC (Permanent Magnet DC motor) or electric actuator for every function or movement to enhance the power efficiency and reduce the energy consumption. **There is no hydraulic equipment or function.**

The unit has a screw type compactor that carries compacted waste through a front body wall and ejector panel. Full eject is performed with packthrough ejector. No tilt of body is required for unloading. All functions of the body and arm are driven by the energy from a battery. No power from thermic engine of the chassis is required to energize the body and the arm. The unit is self sufficient with its own battery pack, no need of power from the chassis to operate the body. Zero diesel, CNG or LNG consumption is required to run all functions of the body and arm for a full working day (1000 carts / day) so zero GHG (GreenHouse Gaz) emission are related to the body operation. Fully recharge of the battery is 4 to 8 hours.

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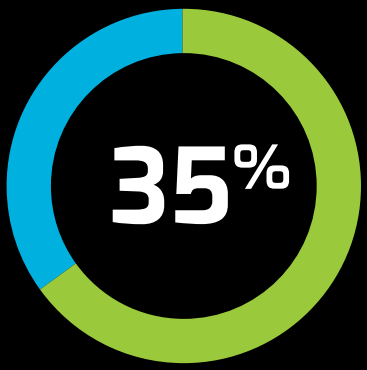
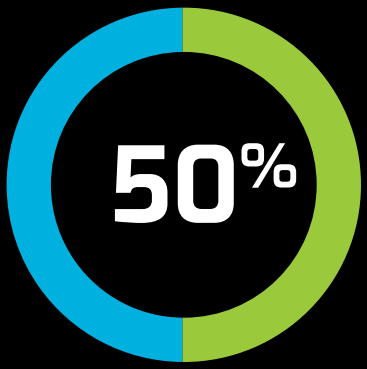
SAVINGS

ELECTRIC
VS. HYDRAULIC



REDUCTION OF FUEL CONSUMPTION WITH AN ELECTRIC VS. HYDRAULIC ON A FUEL CHASSIS



REDUCTION OF THE ENERGY CONSUMPTION OF AN ELECTRIC VS. HYDRAULIC ON AN ELECTRIC CHASSIS

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SPECIFICATIONS

BODY CAPACITIES: 15,3 to 25,2 m³ | 20 to 30 cu.yd

BODY	**25,2 + 2,3 m³ | 27 + 3 cu.yd**
BODY WEIGHT	5,900 kg | 13,000 lbs (including battery pack)
CAPACITY	15.3 m³ | 20 cu.yd **or** 20.6 m³ | 27 cu.yd
LENGTH	6,172 mm | 243 in **or** 6,706 mm | 264 in
MADE OF	12 ga (2 mm), grade 80
FLOOR	5 mm (3/16 in), 100,000 tensile strength, abrasion resistant
TAILGATE	
CAPACITY	0 m³ | 0 cu.yd **or** 2.4 m³ | 3 cu.yd **or** 4.6 m³ | 6 cu.yd
LENGTH	305 mm | 12 in **or** 610 mm | 24 in **or** 813 mm | 32 in
MADE OF	12 ga (2 mm) steel, grade 80
MECHANISM	2 electric actuator unlock/lock the tailgate and lift/close it in the same movement
HOPPER	
CAPACITY	2,3 m³ | 3 cu.yd
FLOOR	9 mm (3/8 in) abrasion resistant steel with 400 HB of hardness
AUGER COMPACTOR	4,6 m³/min (6 cu.yd/min) drive by unique planetary mechanism design to maximize compaction and develop 30,800 Nm (22,600 lbs/ft) torque on refuse. Automatic torque and speed control allows collection of garbage, recycling and organics, without destroying material and avoiding packing jam. The tapered screw allow a 3 phases compaction of the material, radial compaction and axial compaction into the auger area followed by the final compaction phase inside the body.
PACK THROUGH EJECT PANEL (PATENT PENDING)	
	The patent pending concept allows packing through the front wall of the body and unload with an eject panel driven by PMDC motor, planetary and chains. The system has a moving shutter that closes the packer opening to prevent garbage from falling back behind the ejector while the unloading operation.
AUTOMATED ARM (PATENT PENDING)	
	Close grab, no swing out, 3 m (10 ft) reach for bins 120, 240 and 360 liters (30, 60 and 90 gallons) with a lifting capacity of 350 kg (750 lbs). All 3 functions are powered by PMDC electric motors and gearbox combination for a cycle time of less than 10 secondes.
ELECTRIC	
BATTERY	LiNMC high density technology allows light weight and quick recharge (4-8 hours) on Type 2 charging station, 240 VAC compatible J1772. Powered heat pads are installed in the battery pack to maintain the battery at its best working condition and temperature.
AUTONOMY	46 kWh of capacity, allows collection over of 1,000 bins per day with the overnight charge in any temperature conditions.
CHASSIS	
	Self sufficient with the battery pack, only a 300 HP diesel engine is required. Without using any power from the diesel engine for the body functions, fuel saving between 30-40%. With this concept, if mounted on an electric chassis, there would be enough energy to meet a full day of work on a regular route of over 1,000 bins/day.
CONVENTIONAL	56,000 GVW, 256 in WB (27 cu.yd body)
CABOVER	60,000 GVW, 220 in WB (27 cu.yd body)

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