

by Paul van der Werf

*"A cart with a spherical bottom can reduce collection time by up to 20 per cent."*



# Bottoms Up!

New cart design adds strength and efficient emptying

Canada's first green bin programs have now passed their 20th anniversary. Notwithstanding the youth of these programs, the carts and bins used to collect organics have evolved considerably.

Debate continues over the best way to collect the full range of organic wastes from the residential curbside. What is the ideal form to follow the most efficient function? This question arose with the first-generation programs, which typically collect food and yard waste in the same 240 litre cart, and also with second-generation programs that collect only food waste (and some non-recyclable paper) in 45 litre bins.

Key issues with both carts and bins have been their strength, the time required to empty them, cleanliness, and the impact of cold winters on organic wastes (freezing them to the inside of the containers).

While containers come in different sizes, what unifies them reminds me of a Queen song: They all have square fat bottoms. Until recently no one seems to have considered a cart with a perky round bottom.

The P. Henkel company of Germany — started by the grandson of Willy Otto (as in Otto carts) — has developed a cart with a spherical bottom. In Canada they're exclusively distributed by Nova Scotia's Speed Eco group.

Paul Speed, Speed Eco's owner, is no stranger to this industry. He's arguably responsible for selling more carts into green bin programs than anyone else in Canada. His almost off-grid approach (no web site, no social media) relies on personal relationships built up over his 25 years in the industry. He has excelled in creating the necessary narratives to match green cart design changes.

"In the 1960s everyone thought that Converse running shoes were what you needed if you had to run from point A to B," Speed says. "At some point Nike came along and said, Why don't you try these more comfortable shoes that you can actually run in?"

While a still a hipster fashion statement, nobody really runs in Converse running shoes anymore. Likewise, for carts it may no longer be hip to be square.

"The physics behind the spherical bottom design quite simply means that the organic waste slides out more quickly," says Speed, "and since there are no corners, all the organic waste is removed."

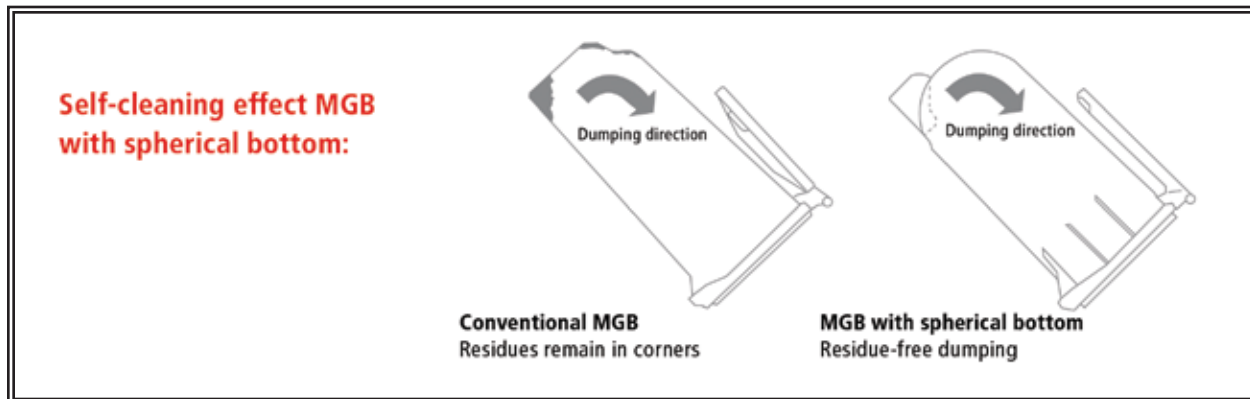
"Quite frankly they are the next generation of carts."

The sphere is the strongest geometric shape and therefore makes a cart stronger. This helps them better resist the inevitable pounding they receive from waste collectors.



P. Henkel's new organics cart is distributed in Canada by Speed Eco.

## ORGANIC MATTERS



A typical urban installation.

### Inroads

The carts have started making inroads in Canada.

In the spring of 2013 a number of communities, with some of the longest running green bin programs (including Lunenburg, Chester and Bridgewater Nova Scotia), started testing the carts. During this (very cold) winter the carts have also been tested at various IC&I locations in Nova Scotia.

Overall, waste collectors have been happy with how the carts function.

The organic waste that gets stuck in the corners of square-bottomed bins slows waste collectors down. A cart with a spherical bottom has no hiding places and can reduce collection time by up to 20 per cent (and remain relatively clean).

Some audit work was completed in residential areas in the fall after three months of summer usage. In a street audit of 200 homes in four communities, up to 60 per cent of square-bottomed carts had 0.5-1.5 kg

of residuals left in them after emptying, compared to 10 per cent of the spherical carts which had no more than 0.5 kg of residue.

This winter has provided an excellent opportunity to test cart performance as it relates to freezing. Study of use at IC&I locations, in particular a popular coffee shop, has been promising. The coffee ground and filter mélange comes out after a (normal) knock from the cart lifter (as part of the emptying process) to break the seal, while waste collectors struggle, sometimes for minutes, with the square-bottomed carts.

Both Lunenburg and Chester, Nova Scotia currently supply these carts to residents to replace broken carts. As well, Nova Scotia IC&I waste collectors GE's All Trucking Ltd and EFR Disposal are using these carts. ♻️

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