

WASTE NEWS

BigBelly containers live up to name

By: Tracy Hayhurst
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With a name like BigBelly, this trash can sounds like it's meant to be stuffed, and it is.

The can is designed to hold about five times the volume of a typical waste receptacle because it's a trash compactor, but it's no average crusher - it operates on solar power.

The BigBelly solar trash compactor from Needham, Mass.-based BigBelly Solar is the first and so far only stand-alone solar-powered trash compaction system.

The company, which began its life as Seahorse Power Co., was started in 2003 because founder Jim Poss said he kept seeing overflowing garbage cans in downtown Boston.

"I had a background in electronics, especially electric vehicles, so I knew in my head how to solve the problem: with a solar-powered trash compactor. I knew it was technologically feasible to run it purely off solar power, but it wasn't very easy to get there. It took four years to figure it out, but the machines work great, even with ambient light at bus stops in Seattle," Poss said.

"You don't have to worry about the wiring, you can move things around. But with our solar technology, we had to develop some pretty advanced, actually very advanced, energy management systems to power this compactor for a couple of reasons: Typically with trash cans you're not dealing with locations that have a lot of sunlight. You don't have a choice to put them where the sun is so strong, so we had to push the technology to allow us to do that. And we had to generate 1,400 pounds of force to compress the trash in any location, even those with lousy solar exposure. Basically, we have to run our panels where the sun don't shine."

The unit holds 150 gallons of trash, compacted to about 20 percent of its normal size. This allows for longer stretches of time between collections, saving time and fuel and freeing workers to do other things.

"We looked deeper and found a lot of other problems out there," Poss said. "Litter overflows in the parks, on the beaches and into the sewers, but it's the collection that is a huge burden. The trucks are expensive and get about 3 miles to the gallon, and they burn over a billion gallons of diesel a year. Think about all the problems associated with that and how it could improve if we cut consumption."

Putting BigBelly cans on beaches, for example, reduces litter that attracts seagulls, thereby reducing droppings that contribute to bacterial contamination of the water, Poss said.

The can's design has been tweaked several times. The latest version uses less steel and more recycled material, and it weighs 200 pounds less and has a footprint a third smaller than the previous model. The can is 50 inches tall, weighs 300 pounds and is manufactured in Vermont.

"We have tried to make it as environmentally friendly as possible, with lots of recycled content. It is European standard compliant, the batteries are recyclable, and when we ship the units, we bulk-ship to reduce costs and offset our CO₂," Poss said.

BigBelly cans cost between \$3,100 and \$3,900 each. The variance depends mostly on volume and such features as custom panels or wraps. The company says cans usually pay for themselves within about 18 months, depending on where they are located.

Collection costs outweigh the container's cost, and with an average \$2 per can per pickup in heavy traffic areas and up to \$13 per can per pickup in remote areas, "the cost of the can is irrelevant to the costs of collection," Poss said.



TOP IT OFF: BigBelly waste containers work well in busy areas like the travel platform shown above.

“We want to take the garbage trucks and help people use them as efficiently as possible,” he said. “If we can make one truck as effective as four trucks, that’s a good thing. The cheapest, most efficient garbage truck is the one you don’t have to use as much.”

BigBelly’s first customer was Vail Resorts, which bought a can on the notion that it was environmentally friendly, would keep wildlife out and could eliminate hauling trash in front of customers trying to eat lunch.

“They took a chance, and these days a lot more people do want to be on the cutting edge and are willing to invest in better practices,” Poss said.

Gerald Checco, superintendent of the Cincinnati Park Board, said he learned about the cans a couple of years ago after a park department intern from the University of Cincinnati found the product while doing research. The department now has 10 BigBelly cans and regularly applies for grants to buy more.

“As we talked more, we asked [BigBelly] if the cans can call us when they are full, and they entered into an agreement with the electrical engineering department at the University of Cincinnati to come up with wireless systems that will transmit a signal to us when the cans need to be picked up,” Checco said.

A map will show which cans are full and which ones are about to be full, and then help the department schedule routes accordingly, he said. The program is set to start in the fall.

“Our staff has been reduced in recent years from 400 to 150, but there’s still the same amount of land to take care of. This helps us divert people from trash collection to planting flowers and other beautification efforts,” he said.

BigBelly Solar also has introduced recycling compactors.

“To make an impact on the whole system, we will need to make big ones, short ones, tall ones, single-stream recyclers,” Poss said.

“With the recycling kiosks, you can have different modules that we can customize.”

As for competition, he said he hasn’t found much.

“There are some people putting solar panels on top of compactors, but it’s greenwashing - they’re still plug-in machines,” he said.

“My house isn’t solar-powered because I have a solar calculator on my desk. The green phenomenon is new, and lots of companies claiming to be green aren’t. We have a challenge to educate the customer.”

For more information, contact the company at 888-820-0300 or visit BigBellySolar.com.

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<http://www.wastenews.com/arcshow.html?id=08042804601>