

Maximize Dumpster Efficiency, Minimize Waste Disposal Costs

By: **Stefan Nielsen**, Contributor

Every year, companies spend huge sums of money just to get rid of trash. Most companies deal with waste by contracting a waste-hauling company. In many cases, the waste hauler provides large, open-top containers/dumpsters in which to collect the trash. They drop off an empty dumpster at the customer's premises; pick it up at a regularly scheduled time (usually once a week or even more frequently); and replace it with another empty dumpster.



Rolling compactors consist of a two-ton steel roller drum at the end of an articulated boom. The surface of the drum is covered with sharp, spiked, teeth-like protrusions. There are many options available to help minimize waste-disposal costs. (photo courtesy Epax Systems, Inc.)

The cost of this type of service varies from one company to another, but in almost every case, it is charged on a per-haul basis. Factored into the cost is the distance the waste disposal service has to travel to retrieve the full dumpsters, plus the distance it has to travel to the disposal site—as well as fees the company must pay to dispose of the trash. Depending on the number of dumpsters a company has, and how quickly they are filled, the expense can easily be tens of thousands of dollars per year.

The best way to reduce these expenses is through the implementation of a thoughtful waste-reduction program. These types of programs involve educating employees to

think about what—and how much—they are putting in the dumpster. It encourages them to make every possible effort to reuse or recycle as much “trash” as possible. However, even with such programs in place, there is still a need to throw things into a dumpster, so companies still have waste-hauling expenses.

In most instances, trash haulers charge based on the size of the dumpster, regardless of how full it is. And, because most dumpster hauls happen at a preset interval, more often than not, dumpsters are replaced when only a very small percentage of their volume capacity is used. That means a large percentage of what customers pay to hauling companies is for unused volume capacity. Estimates suggest that often times, dumpsters contain as much as 80% air and only 20% waste. By simply reducing this air-to-waste ratio, companies can dramatically reduce the cost of waste disposal.

THE GREATER THE TRASH/ AIR RATIO, THE LOWER THE COST OF WASTE DISPOSAL

Most companies do not give much thought to how they fill a dumpster. They simply throw boxes, crates, construction debris or other waste into it until it is “full.” This haphazard approach can lead to large voids and empty spaces. Waste may be stacked higher than the dumpster sides, giving the appearance that it is full when, in fact, it still has a significant amount of unused volume capacity. This is especially true

for bulky items, like shipping crates and cardboard boxes, or in the case of construction debris, kitchen cabinets, furniture, etc.

If waste is broken down and compacted, the amount of material thrown into a dumpster gets much closer to the dumpster's actual volume capacity.

HOW MUCH MONEY CAN WASTE COMPACTION SAVE?

The best way to save money on trash hauling is to reduce the number of hauls required. So, if compaction means you can fit two times more waste in a dumpster, it also

means that same dumpster only needs to be collected half as many times. And, with higher compaction ratios (which are often achievable), the frequency of hauls can be reduced even further—saving even more money. In some cases, a business may even be able to reduce the total number of dumpsters on site, gaining even greater savings.

ACHIEVING MAXIMUM COMPACTION OF OPEN-TOP CONTAINERS

Trash compactors are not a new concept. Drive around any industrial park, and you'll see big, enclosed metal boxes that use hydraulic rams to compress waste. But many people are unfamiliar with rolling compactors. These extremely effective devices are designed specifically for compacting waste in open-top containers.

Rolling compactors consist of a two-ton steel roller drum at the end of an articulated boom. The surface of the roller drum is covered with sharp, spiked, teeth-like protrusions.

As the compactor's articulating boom moves from one end of the dumpster to another, the 4,000-lb drum rolls over the contents—tearing, shredding and mangling them—creating smaller and smaller pieces with each pass. At the same time, the massive weight of the roller

drum crushes and compacts items, eliminating air pockets and allowing the dumpster to be filled to near-maximum volume capacity.

With this type of compaction, the open-top containers can achieve an extremely efficient ratio of 80% waste and only 20% air—a 400% improvement vs. non-compacted containers.

CHOOSING A ROLLING COMPACTOR FOR YOUR FACILITY

There are a handful of options for any business that wants to utilize a rolling compactor to minimize waste-disposal costs.

- ★ The first option is to purchase, lease or rent a rolling compactor for installation onsite. The most common systems are permanently installed and service a single dumpster.
- ★ If multiple dumpsters are used, a traversing rolling compactor can be employed. These units are mounted on steel rails with several dumpsters placed next to them at a 90° angle. The rolling compactor then moves up and down the track, compacting waste in each dumpster, as necessary.

Omtec
Progressive Ergonomic Movement

Since 1984
BRUTE Not Needed

Compact 90 Degree Conveyor Transfers

Proudly Made in the U.S.A.

OMTEC POP-UP BALL TRANSFER STRIPS...
Increase Your Productivity Through Our Knowledge!

Dealer inquiries accepted.
Contact us for information and your local dealer today at:
Call: (508) 481-3322 • Email: info@Omtec.com • www.Omtec.com

Omtec transfer strips make for quick delivery lead times, custom to your imagination!

COMPACTORS/WASTE REDUCTION

- ★ When several dumpsters are used but are situated in different locations on a property, a mobile rolling compactor should be considered. These mobile compactors can be driven around a property to service dumpsters wherever they are located.
- ★ The final option is to contract with a service company that uses a truck-mounted rolling compactor to visit a site and compact waste on either an on-demand or contract basis. This option is extremely popular with building contractors using dumpsters for a short period of time to dispose of construction debris.

Whatever option is chosen, the amount of waste in each dumpster is maximized, and the waste disposal cost is minimized.

ADDED SAFETY AND PRODUCTIVITY BENEFITS

Because the benefits of getting more trash in the same container are so obvious, some companies attempt home-grown compaction techniques. Unfortunately, in most cases they waste employees' time and can often be downright dangerous. Here are just a few safety and productivity advantages of a rolling compactor.

1. *No need to pre-break waste:* Many employees take it upon themselves to break down cardboard boxes,

wooden crates, etc., prior to disposal, in an effort to get more into the dumpster. The goal is worthwhile, but the time and effort expended can be a real productivity drain. There's also a safety concern, as workers use saws and other power tools that may not be well-suited to the task. Even worse, they might try to kick, stomp or smash items with their feet—which can lead to serious injury.

2. *Load dumpsters at will:* While enclosed industrial compactors offer similar benefits to rolling compactors, they can't be fed during the compaction process. This can mean workers often stand idly by, waiting for the compaction cycle to end, so they can load additional items. With an open-top dumpster and rolling compactor, items can be added continuously—even during the compaction process. This means workers waste no time standing around waiting to load additional items.

3. *Makeshift compaction tools don't work well and waste a lot of time:* We've seen concrete-filled tubs placed in dumpsters to compact waste. Unfortunately, the process is time-consuming and only marginally effective. We've also seen front-end loaders and backhoes used to crush waste. This, too, is only somewhat effective, and it takes a trained equipment

ALARMS DESIGNED FOR ALL ENVIRONMENTS

No matter the environment, we want your machines to be seen and heard.

We manufacture audible and visual alert products in a wide range of sound pressure levels to match your application.

	Shotgun	120 dB
	Cymbal Crash	115 dB
	Heavy Truck	110 dB
	Motorcycle	105 dB
	Orchestra	100 dB
	Factory Noise	95 dB
	Tractor	90 dB
	Garbage Disposal	85 dB
	Vacuum Cleaner	80 dB
	Alarm Clock	75 dB
	Noisy Restaurant	70 dB
	Piano	65 dB
	Speaking Voice	60 dB
	Quiet Office	55 dB



- Announcer™ AN454
- CANAlarm™, Ultra™ Series, M-80 Series, Turbo™ X-tra Loud Series, Audialarm II™ Medium Loud Series, win Turbo™ Series
- Turbo™ Medium Loud Series, OneTouch Silencer™ Series, Audialarm II™ Medium Loud Series
- Announcer™ AN100/AN125, Audialarm II™ Low Output Series
- Audialarm II™ Soft Output Series



To find an annunciator right for your application, view our extensive catalog at www.FloydBell.com



operator away from his or her primary duties. Finally, there's the most dangerous, least effective practice of all: employees climbing into dumpsters to rearrange contents for better space utilization. This is a huge safety and liability issue, not to mention ineffective and a huge time suck.

Whether a business has one dumpster or 20, a thoughtful waste-reduction program, paired with a rolling compactor, can provide huge savings and measurable ROI. Often, the equipment pays for itself in just a year or two. **WMHS**

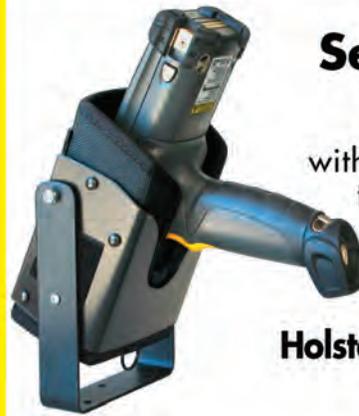
ABOUT THE AUTHOR

Stefan Nielsen is Vice President and Chief Operating Officer of Epax Systems, Inc. The company specializes in waste-reduction solutions, including the popular ROPAX Series of Rolling Compactors designed to save money and reduce landfill usage by maximizing dumpster-utilization efficiency (www.epaxsystems.com).

Want to contribute to *Workplace Material Handling & Safety*? Let us know if you have an interest in writing an article for an upcoming issue.

Contact: Maureen Paraventi, Chief Editor, maureenp@rdgmedia.net

Bumpy Rides?



Secure Your Scan Gun

with a LOGISTERRA® truck-mount Holder and...

Holster Your Side Arm with a Gun Belt (left/right changeable)

- Proven products
- Years in service
- Made in USA
- Deployed worldwide



LOGISTERRA, INC.

619-280-9992

info@logisterra.com

www.logisterra.com

COMBILIFT

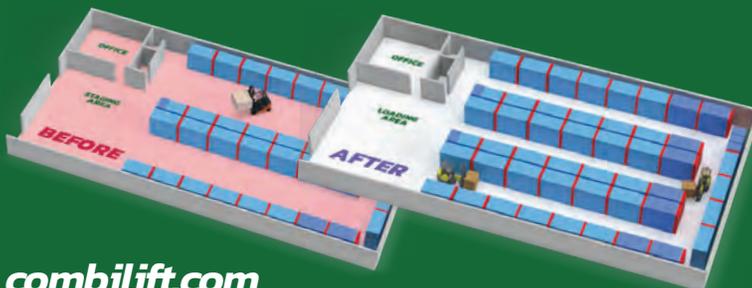
LIFTING INNOVATION

Safety | Storage | Efficiency

Save up to 50% more storage with Combilift

Before you invest in upgrading the infrastructure of your warehouse, find out how Combilift can increase your storage, improve productivity and enhance safety. With over 21 years' experience in volume optimization, our team of warehouse planning experts know how to make your space work harder for you.

Contact us today to arrange a site survey! Our warehouse design consultancy service is FREE and without obligation.



combilift.com

