

Solid Waste Planning: Space Allocation Guidelines

Below are some general guidelines to assist in solid waste planning for new development projects.

Note: Athens Services provides hauling services and the data provided here is based on general assumptions. There are numerous factors that can impact the assumptions provided, such as the volume of waste generated, bin, cart or compactor size, frequency of service, etc. It is recommended that Athens provide review of proposed waste plans prior to the City granting approval.

To properly determine the space needed for solid waste storage, it is important to understand how much solid waste the site (residential or commercial) is generating.

Residential Service

For planning purposes, standard service for residential (1-4 units), will be cart service. Proper space will need to be allocated for a minimum of 3 carts per unit.

Residential Type	Total Waste Weekly (cubic yards)	Equipment	Collection Frequency
Residential (1- 4 units) Cart Service	1 yd ³	1 Qty. 64 Gallon Trash Cart 1 Qty. 64 Gallon Recycle Cart 1 Qty. 64 Gallon Green/Organics Cart	1/Week

**Note that customers may order different cart sizes, and increase quantities, based on their individual needs.*

Standard service for residential (5 units for more) should include one trash (3 yd³), one recycle (3 yd³), and one organics bin (2 yd³). Under this assumption, a total of 18 yd³ of trash, 18 yd³ of recycle, and 12 yd³ of organics waste can be collected each week.

Residential Type	Total Waste Weekly (yd ³)	Equipment	Collection Frequency
1-25 Units	Up to 18 yd ³ (trash) Up to 18 yd ³ (recycle) Up to 12 yd ³ (organics)	1 Qty. 3 Yard Bin (Trash) 1 Qty. 3 Yard Bin (Recycle) 1 Qty. 2 Yard Bin (Organics)	Up to 6 Days/Week
26-49 Units	Up to 36 yd ³ (trash) Up to 36 yd ³ (recycle) Up to 24 yd ³ (organics)	2 Qty. 3 Yard Bin (Trash) 2 Qty. 3 Yard Bin (Recycle) 2 Qty. 2 Yard Bin (Organics)	Up to 6 Days/Week
50 Units & Over	Over 30 yd ³	Compactor Service*	TBD

** There are various types of compactors available, depending on the project design. See attached compactor information for more details.*

Commercial Service

Below are some general guidelines for commercial service.

Commercial Type	Total Waste Weekly (yd ³)	Equipment	Collection Frequency
Up to 10,000 sf	Up to 18 yd ³ (trash) Up to 18 yd ³ (recycle) Up to 12 yd ³ (organics)	1 Qty. 3 Yard Bin (Trash) 1 Qty. 3 Yard Bin (Recycle) 1 Qty. 2 Yard Bin (Organics)	Up to 6 Days/Week

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For buildings over 10,000 square feet, see some typical uses are listed below. These are general guidelines to assist in forecasting solid waste generation. Projects should be evaluated individually in conjunction with Athens Services to determine accurate service level.

Business Type	Total Waste Weekly (yd ³)	Business Type	Total Waste Weekly (yd ³)
Warehouse/Supermarket/ Department Store Per 10,000 sq. ft.	48 yd ³	Hotel w/Restaurant (Per 25 rooms)	9 yd ³
Office Building Per 1,000 sq. ft.	3 yd ³	Schools (with Cafeteria) Per 450 Students	15 yd ³
Shopping Center (No restaurants) Per 1,000 sf	9 yd ³	Restaurant - Sit Down (Per 80 seats)	36 yd ³
Retail (No restaurants) Per 1,000 sf	9 yd ³	Restaurant - Fast Food	9 yd ³
Hospital/Nursing Home (Per 10 beds)	6 yd ³	Drug Store	9 yd ³

Container Specifications

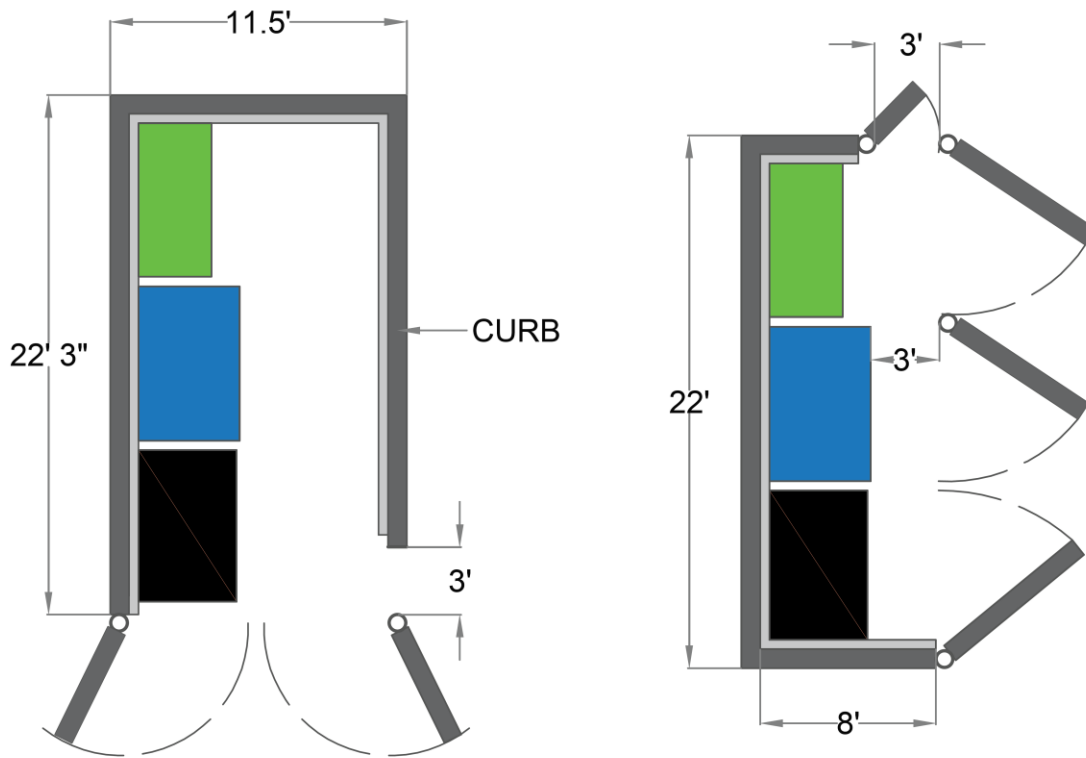
Container	Width	Depth	Height	Equivalent Containers	Notes
20 Gallon	20"	18"	33"	N/A	N/A
32 Gallon	20"	23"	39"	N/A	N/A
64 Gallon	37"	28"	41"	2 Qty. 32 Gallon Carts	N/A
96 Gallon	29"	34"	45"	3 Qty. 32 Gallon Carts	N/A
1 yd ³	72"	24"	28"	3 Qty. 64 Gallon Carts	N/A
1.5 yd ³	72"	29.5"	34.5"	3 Qty. 96 gal carts	N/A
2 yd ³	72"	34.5"	41.5"	4 Qty. 96 gal carts	N/A
3 yd ³	72"	41.5"	50.5"	6 Qty. 96 gal carts	N/A
4 yd ³	72"	50.5"	57"	8 Qty. 96 gal carts	Not available for food waste
5 yd ³	72"	66"	59"	N/A	Not available for food waste
3 yd ³ Compactor	74"	45"	51"	N/A	N/A

Optional: Bin with caster, add 8" to height.

Solid Waste Planning: Space Allocation Guidelines

Sample Enclosure Options

Below are some samples of trash enclosures for bin service. Each image includes two 3 yd³ dumpster and one 2 yd³ dumpster. These are just examples and are not to scale and will require engineer/architect design. Each enclosure design will need to be evaluated by Athens Services on a per project basis.



- TRASH
- RECYCLING
- GREENWASTE/ORGANICS

Compactor Service

Size and type of the compactor vary from each account and customer need, but some standard size compactors are provided in the attached documentation. The type of compactor used will also determine which type of truck will be used to haul. Contact Athens Service in the planning stage and before installing compacting units.



Mini-Mac[®] Apartment Compactor

The Mini-Mac apartment compactor is a small, yet powerful compactor that can fit in areas where space is limited such as trash rooms of apartment and high-rise buildings. It is commonly used in conjunction with a chute feed system in multi-storied buildings.

Mini-Mac Compactor

Standard Features and Benefits

- 4:1 compaction ratio over un-compacted waste receptacles
- Remote power unit
- Convenient single side ratchet
- Push button controls mounted in the panel box face
- Hopper with access door and interlock for hand feed or chute feed applications
- Photoelectric cycle control
- Full container light
- CYCON Life-Xtender Cyclic Control System that offers reliable, solid state circuitry eliminating pressure and limit switches



The Mini-Mac packs into a 2 cubic yard container on poly-clad casters that allow it to be moved to a pickup area. The Mini-Mac containers can be configured for front- and rear-load collection vehicles.



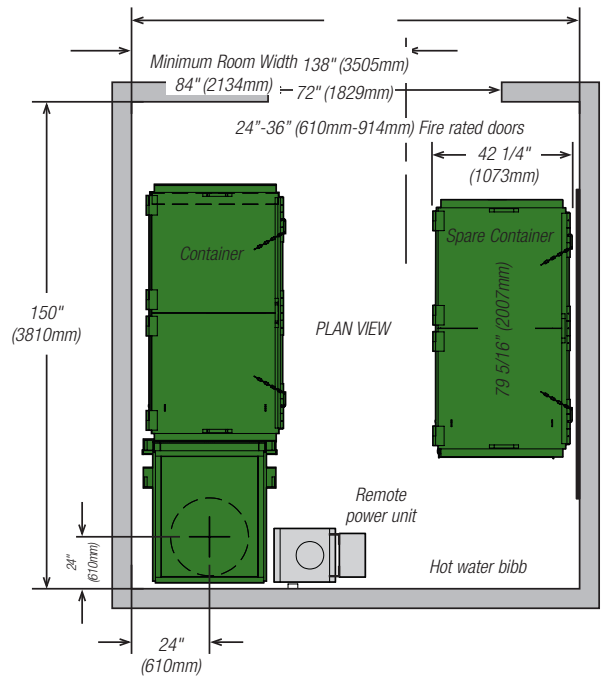
**Environmental
Solutions Group**

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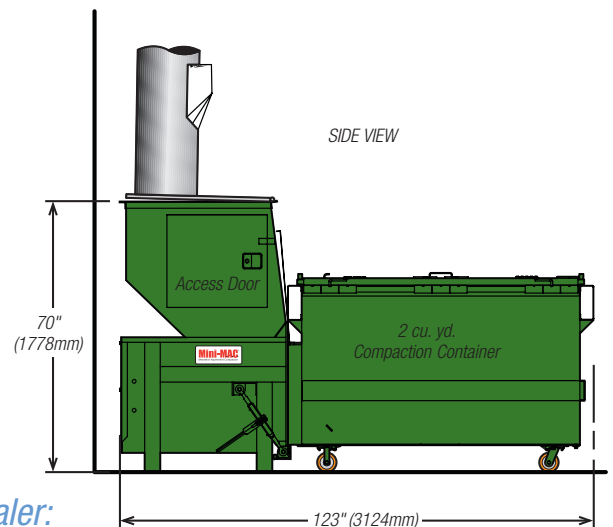
Mini-Mac[®] Apartment Compactor

Dimensions and Specifications

Specifications	Model 3A		Model 5A	
Charge Box Capacity				
[Mfr. Rating]	0.39 cu. yd.	.30 m ³	0.39 cu. yd.	.30 m ³
[WASTEC Rating]	0.28 cu. yd.	.21 m ³	0.28 cu. yd.	.21 m ³
Clear Top Opening	22.5"L x 28"W	572mm x 711mm	22.5"L x 28"W	572mm x 711mm
Capacity Per Hour	37 cu. yd.	28 m ³	74 cu. yd.	57 m ³
Performance Characteristics:				
Cycle Time	28 sec.		14 sec.	
Normal Force	13,900 lbs.	6305 kg	13,900 lbs.	6305 kg
Pack-Out Force	16,400 lbs.	7439 kg	16,400 lbs.	7439 kg
Normal Ram Face Force	23.2 psi	160 kPa	23.2 psi	160 kPa
Pack-Out Ram Face Force	27.3 psi	188 kPa	27.3 psi	188 kPa
Ram Penetration	4"	102mm	4"	102mm
Weight	1,600 lbs.	726 kg	1,600 lbs.	726 kg
Electrical Equipment:				
Tri-Volt Motor 208/230/460	3 hp	2.2 kW	5 hp	3.7 kW
Electric Control Voltage	120 VAC			
UL[®] and CUL[®] Listed				
Remote power unit with controls mounted in the face of the box				
NEMA 3-type, All circuits fused				
Standard controls: Keylock start/stop/reverse				
Hydraulic Equipment:				
Hydraulic Pump Capacity	3 gpm	11.4 L/min	6 gpm	22.7 L/min
Normal System Pressure	1650 psi	112 bar	1650 psi	112 bar
Maximum System Pressure	1950 psi	134 bar	1950 psi	134 bar
Hydraulic Cylinders (2) - Bore	2.5"	64mm	2.5"	64mm
Hydraulic Cylinders (2) - Rod	1.25"	32mm	1.25"	32mm



Typical Mini-Mac Model 3A compactor configuration with chute system



Compactor Rental and Leasing Programs Available

For detailed specifications, recommendations, or free economic studies comparing various systems, contact Marathon Customer Care at **1-800-633-8974**.



Authorized Dealer:

MARATHON
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Marathon Equipment Company
P.O. Box 1798
Vernon, AL 35592-1798
800.633.8974
www.marathonequipment.com
NJPA Contract #060612-ESG

National Waste & Recycling Association
Collect. Recycle. Innovate.

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www.doveresg.com



Pictures in this literature are illustrative only. Specifications are subject to change without notice in order to accommodate improvements to the equipment. Complies with ANSI standard Z245.2, all applicable OSHA Regulations, and certified under WASTEC's Stationary Compactor Certification Program. Products must be used with safe practice and in accordance with said regulations and standards.

Untouchable VIP™ and VIP FL/3 Self-Contained Compactor/Container



*Use for front
or rear load
applications*

*Extra-low feed
heights*

*Rigid anchoring
platform*

Triple interlock

Untouchable VIP



Unit shown with
Green Built option



VIP FL/3



Hotels

Shopping malls

Supermarkets

Restaurants

Alleys

Hospitals

In-plant assembly areas

Untouchable VIP™ (Vert-I-Pack) Compactor/Container

Marathon's Untouchable VIP was developed from a growing need for superior compaction in a small footprint. Originally developed for the narrow alleyways of Chicago, it fits anywhere with limited space where compactation is necessary.

- ✔ The Vert-I-Pack is a real space saver – with more than 13-tons (11,793 kg) of crushing force, it reduces the contents of many open containers into 1 Vert-I-Pack container. This saves your hauler time because the hauler has only one container to pick up. It also prevents weekend overflow, which eliminates the need to schedule those expensive weekend pickups.
- ✔ The Vert-I-Pack is designed with the operator in mind. It has no heavy or clumsy lids to open and close.
- ✔ The Vert-I-Pack controls employee pilferage – optional security kit (rear feed units only) enables the unit to be fed from inside the building, eliminating the temptation to employees to put merchandise into a box, stash the box in the trash container, and return later to retrieve your merchandise.

Containers with Casters

The Untouchable VIP's 2.75 cubic yard (2.10 cubic meter) heavy-duty containers are on casters and can easily be rolled to an area accessible by waste collection trucks. Front load and rear load containers are two different capacities.

Integrated Driver Light

The integrated Driver Light illuminates green to signal the driver that the container is "ok" to be removed and dumped, making dumping simple and quick.



The side-mounted power unit offers easy access for maintenance on the motor and electrical components on the Untouchable.



Images shown with optional equipment

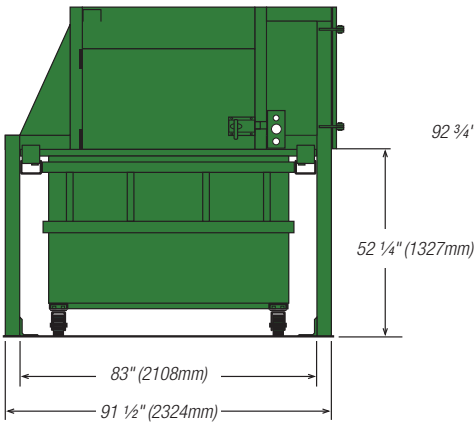
Vert-I-Pack Triple Lock

✔ The mechanical door interlock prevents the door from being opened at all times except when the unit is in the proper feeding position. A second interlock prevents the unit from cycling (operating) when the door is in the open position. The third interlock prevents the unit from functioning when the container is not in the proper position.

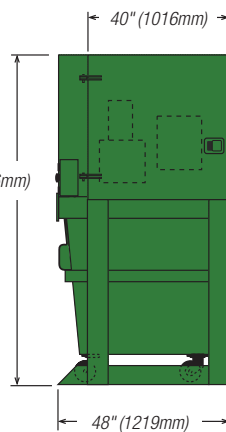


Dimensions Untouchable VIP

FRONT VIEW

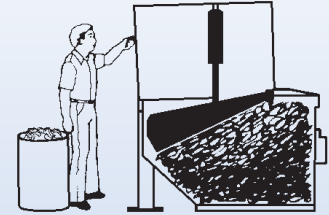


SIDE VIEW



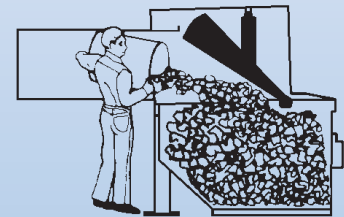
Simple User Operation

Step 1



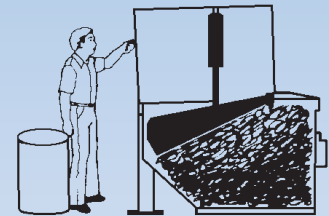
✔ The operator inserts the key and turns it to the "UP" position. When the ram moves to the up position the door can be opened.

Step 2



✔ The large opening allows even a 30 gallon container to be emptied easily. The new waste material is dumped into the cavity left in the container by the previous ram position.

Step 3



✔ Auto-Cycle is standard!

After feeding, the operator turns the key to the "pack" position and then removes the key. The ram will cycle automatically to the down position to compact and hold the waste material there until the next loading cycle.

More than 13 tons (11,793 kg) of crushing power forces the ram 18-inches (457mm) into the container.

Note: Control sequence not applicable to VIP FL/3, which has load/pack controls.

Untouchable VIP dimensions

Feed height	52.25"	1327mm
Overall height	92.75"	2356mm
Overall width	91.5"	2324mm
Overall depth	48"	1219mm
Container weight	825 lbs.	375 kg
Complete assembly weight	3675 lbs.	1667 kg

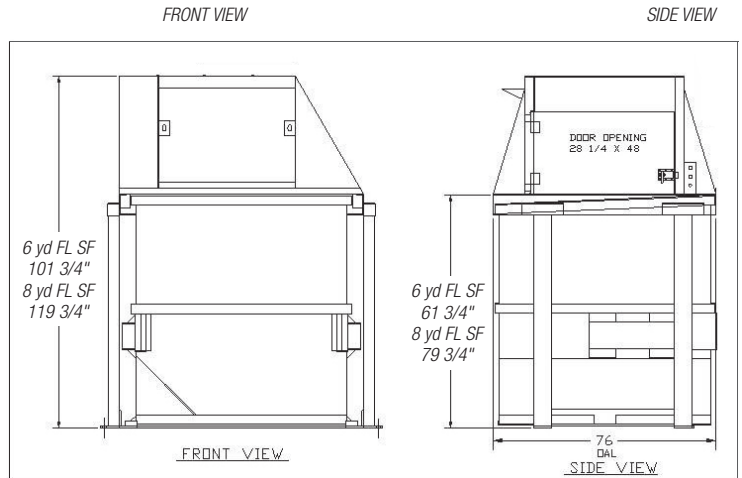
Untouchable VIP™ and VIP FL/3 Self-Contained Compactors

Dimensions and Specifications

Specifications		
Charge Box Capacity		
[Mfr. Rating]	0.72 cu yd	0.55 m ³
[WASTEC Rating]	0.54 cu yd	0.41 m ³
Clear Top Opening	23.5"L x 46"W	597mm x 1168mm
Performance Characteristics:		
Cycle Time	30 sec.	30 sec.
Total Normal Force	26,400 lbs.	11,975 kg
Total Maximum Force	30,200 lbs.	13,699 kg
Electrical Equipment:		
Electric Motor 3/60/230-460	3 hp	2.2 kW
Electric Control Voltage	120 VAC	120VAC
Panel Box Assembly		
UL® and CUL® Listed	Key Operated	120 VAC
All Circuits Fused	2-Button Station Start/Stop	
Hydraulic Equipment:		
Hydraulic Pump	3 gpm	11.4 L/min
Normal Pressure	15.3 psi	1.0 bar
Maximum Pressure	17.5 psi	1.2 bar
Hydraulic Cylinders (2) - Bore	4"	102mm
- Rod	2"	51mm

Dimensions

VIP FL/3



VIP FL/3 dimensions		
Feed height	46.375"	1178mm
Overall height	86.375"	2194mm
Overall width	96"	2438mm
Overall depth	60"	1524mm
Container weight	675 lbs.	306 kg
Complete assembly weight	3375 lbs.	1531 kg



Also available as Green Built®, featuring Solar and other environmentally friendly components.

Marathon's solar option is not UL and CUL Listed.

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