

Clivus Multrum® composting toilet systems

The Clivus central composting toilet system is simple, that's why it continues to work the best. Aerobic bacteria converts all of the solid toilet matter into humus, while the urine slowly percolates through the compost (reaching the cleanout compartment as a stabilized, concentrated liquid fertilizer). Yearly removal of humus from your Clivus may be necessary, but overall they are fairly maintenance-free (as compared to a smaller self-contained composter). The key is in having such a large storage area for compost to decompose slowly and completely. Clivus composters are power vented above roof line via a 4" pipe. The waterless toilet fixture(s) is installed directly above the Clivus composter body. A hole is cut between the floor joists so the toilet chute can extend down to it. A smaller chute (not included) can be run from the kitchen to dispose of table scraps. **Please note that any and all central composting toilet systems require at least six feet of headroom in front of the unit for periodic maintenance such as raking and removal of finished compost.** If you don't have six feet of headroom in your basement or crawlspace, one alternative is a "basement storm door" such as the [Bilco® access door](#) with steps leading directly outside. Always design for easy access to the composter and keep in mind that the larger the composter, the less periodic maintenance needed.

All composters vent constantly to refresh the oxygen/air, promoting biological activity within the compost pile. While it may not be necessary to have a electric fan assist the ventilation of your composter, it is highly recommended, especially in a full-time residential situations where the chance of down-drafts may be more common place. What noticeable composting odor exists, is prevented from escaping the waterless toilet fixture by an in-line fan (or passive non-electric venting) which creates a positive draft, aerating the compost before exiting above the roof line. The key to a composting toilet's *odor-free* operation, is the type of bacteria involved in the decomposition of toilet waste. Aerobic (composting) bacteria thrives in an oxygen rich environment. Anaerobic (septic) bacteria grows in an oxygen deprived environment (pools of water and/or urine). Anaerobic (type found in septic tanks, portapotty, outhouse, or unflushed toilets) bacteria has an unmistakable methane ammonia odor, whereas aerobic (type found in composting toilets) bacteria has an earthy, fresh garden soil aroma. Fecal matter does not turn into a rose when it enters the composter toilet, but it is not going to go septic and smell worse.

Composting toilets are fairly maintenance-free, but the compost itself is often mismanaged. Here's a few points to keep an eye on:

- non-existent moistening systems lead to a dry, hard-packed, inactive compost; an automatic moistening system is a "must have" option!
- excess liquid allowed to collect in the bottom of the composter may develop an offensive odor. You must have an effluent drain system.
- cleaning chemicals can be harmful to the compost, so use mild baking soda and water or a very dilute mixture of vinegar and water.
- bulking material should be added with each bowel movement for better aeration of the compost and carbon for the composting process.
- we recommend using pine (not cedar or redwood) planer shavings (not sawdust or chips) mixed with up to 70 percent sphagnum peat moss.

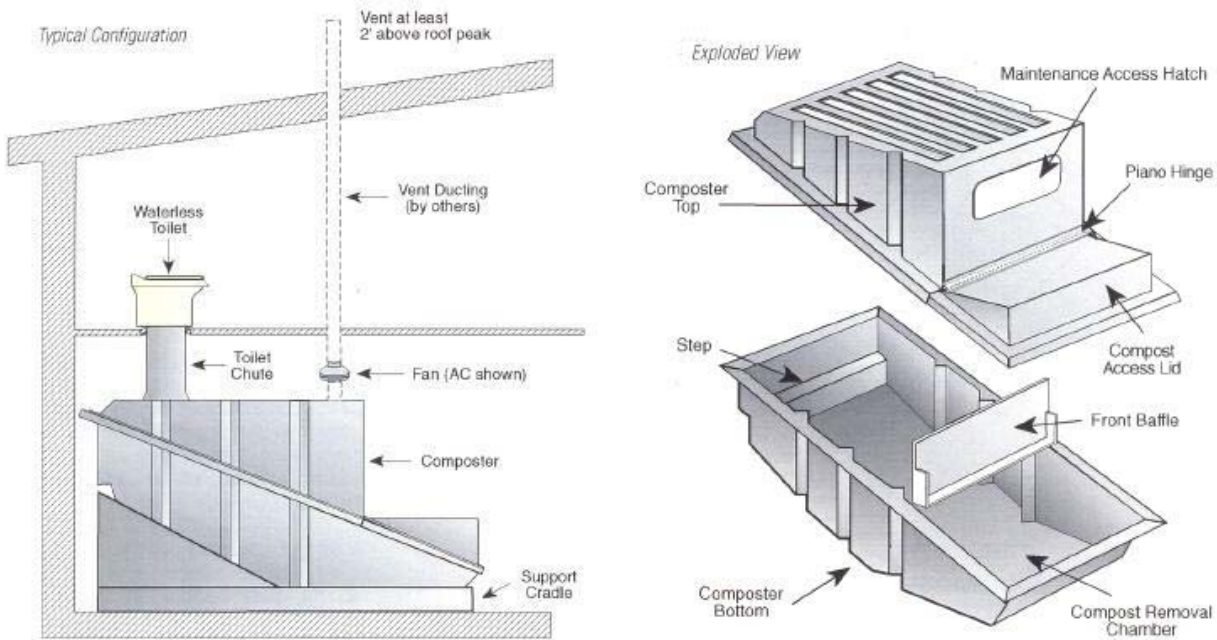
Moistening systems ensure a healthy, active compost by keeping the surface of the pile wet, thereby preventing the interior from

drying out. Filtered, misting spray heads and a digital timer are standard features. An AC or DC non-pressurized system with pump and 110 gallon tank is 495*. A pressurized system where there is a hose bib in composter room (no pump or tank) is \$195*.

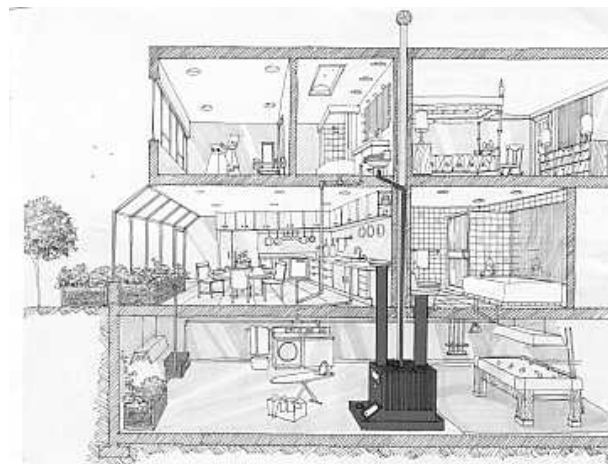
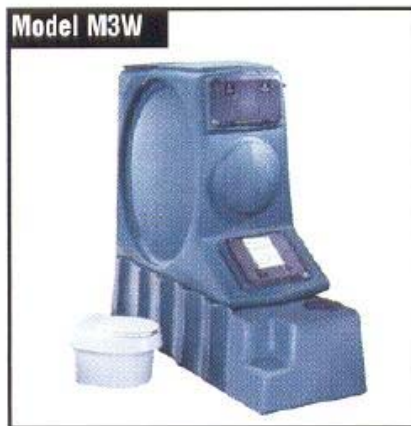
Effluent systems were often overlooked on many older composters. Typically, a \$70 gravity drain cage is installed in the base with a bulkhead fitting that allows effluent to drain out to the leach field. If the field is uphill from the unit, you'll also need an effluent removal system, which is \$295* for a 110 volt AC system.

Ventilation systems may need fan updating or vent repairs to ensure odor-free operation. Composting toilets should not leave an offensive odor in the building; if they do, then something is wrong. Typically, the problem is either a weak fan or unwrapped vent pipe joints. Our AC, in-line, 6" duct fan kit is \$295*. The cheap ones do not last long in this moist environment. The six (or four) inch fan we have used over the years is 122 CFM in-line centrifugal with mushroom shaped commercial plastic housing and is very quiet and exceptionally durable. The installation will require two Fernco rubber boot couplers (6inch by 6inch) to splice blower into vent stack. Fans are normally hard-wired with a switch box and variable speed on/off rheostat installed to limit air volume. For the \$295* delivered price, your kit includes *** one 122 CFM rated blower with isolated mounting bracket *** two 6by6 rubber boots *** one 5A on/off speed control switch.

Fire Suppression System ABC dry chemical horizontally installed 8 pound canister with automatic fan cut-off switch for \$395*.



The three smaller, residential Clivus systems are the model M-3 kit with an 84 inch height and a length of 100 inches, this composter can handle up to 50 uses daily. The M-2 kit has a 66 inch overall height and a length of 65 inches. The M-1 kit is 10 inches shorter and holds fifty gallons less compost than the otherwise identical M-2. All three residential models are 33 inches wide for ease of installation (*you can get them through a doorway*). These composters are made of very durable, one-piece, seamless construction and come complete with a waterless toilet and chute, 55 gallon liquid storage base (cradle), automatic moistening system, automatic liquid removal system, interior ventilation fan, maintenance tool, Multrum bacteria, cleaning solution and all necessary installation



Clivus waterless toilet systems come in a full range of shapes and sizes to meet your needs. The M-10 and M-12 models pictured at right, are the *smallest* of the nine larger commercial composters. Highly recommended for full-time residential and small

commercial sites, this system ships unassembled to allow passage through the rough opening of a 36 inch door jam. The M-10 was tested and certified by the NSF at 22,500 uses per year and has a large (30 inches wide by 48 inches deep) "top working area" for easy installation of the 14 inch diameter waterless toilet chutes.

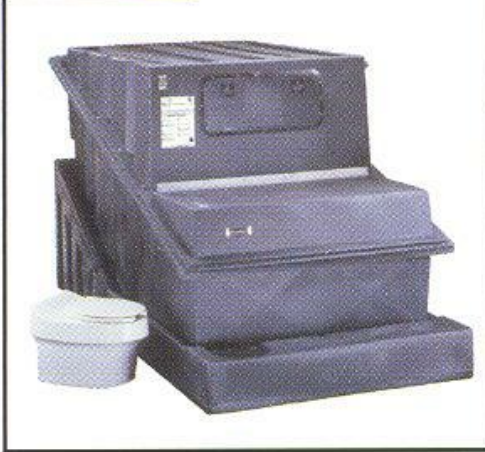
The Clivus M-10, M-12, M15 and M18 composters are of multi-piece construction and ship disassembled for ease of entry into buildings. The package normally includes: two waterless toilets and chutes, compost tank, support cradle kit, automatic moistening system, automatic liquid removal system, interior ventilation fan, maintenance tool, Multrum bacteria, cleaning solution and all necessary installation hardware.

Consult your local Clivus representative for installation details and pricing.

There are a total of thirteen Clivus Multrum composting toilet systems. The three residential kits ([M-1](#), [M-2](#), and [M-3](#)), the two unibody commercial sized units ([M-32](#) and [M-35](#)), and seven commercial sized units which ship unassembled: the three Ten series units ([M-10](#), [M-12](#), [M-15](#), and [M-18](#)) and the three Twenty series models ([M-22](#), [M-25](#), and [M-28](#)). The Ten series are typically mounted on a sloped, wooden "cradle" while the Twenty series rest upon a molded two-piece liquid storage base. The M-18 and M-28 models have the same body as an M-12, but a 2 foot midsection extension increases the capacity by 50%. The M54ADA Trailhead rounds out their line with a self-contained, restroom building/composter: [M54ADA detail page](#).



Model M22



Model M32



Model M25



Model M35



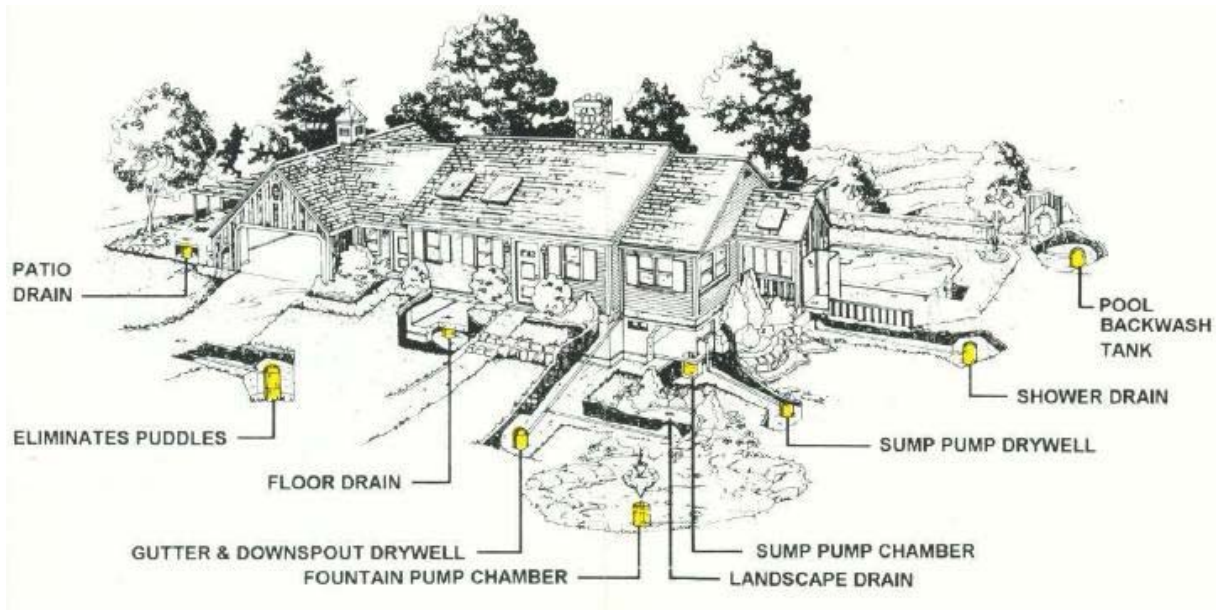
Model M28



Model M54W



Our drywells make excellent leaching pits for composting toilet systems. Gravel backfill around and under the drywell is not necessary, but will certainly increase the capacity of your leaching pit. **A single drywell with a foot of gravel under and around it will dispose of 200+ gallons per day in most soils.** As with all of our products, we'll work closely with you, providing toll-free consultation during construction!



Heavy-duty, recycled, high density polyethylene HDPE plastic leach pit kits come shipped in a handy carrying case ready for on-site assembly. Drywell kits are 24 inches in diameter, 28.75 inches in height (24" without lid), and weigh 23 pounds apiece. Knockouts are provided for nine - 4 inch pipes and fifty four - 1.25 inch diameter leaching holes. Initial surge is 50 gallons, but the capacity is only limited by the size of the leaching pit (dig a larger hole and add more gravel).



2 foot diameter, 2 foot tall, with a 4-3/4 inch lid