YOUR ENVIRONMENT IS OUR BUSINESS.

RAINWATER HARVESTING SYSTEMS

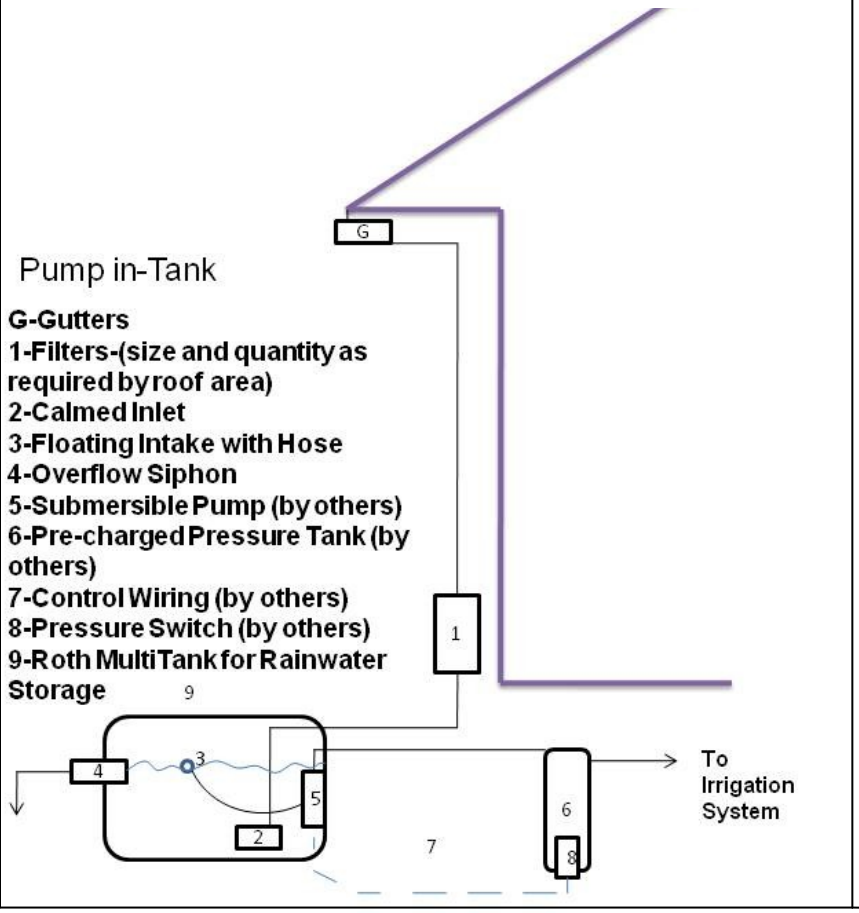
ROTH MultiTank®
High tech. High quality. High time.

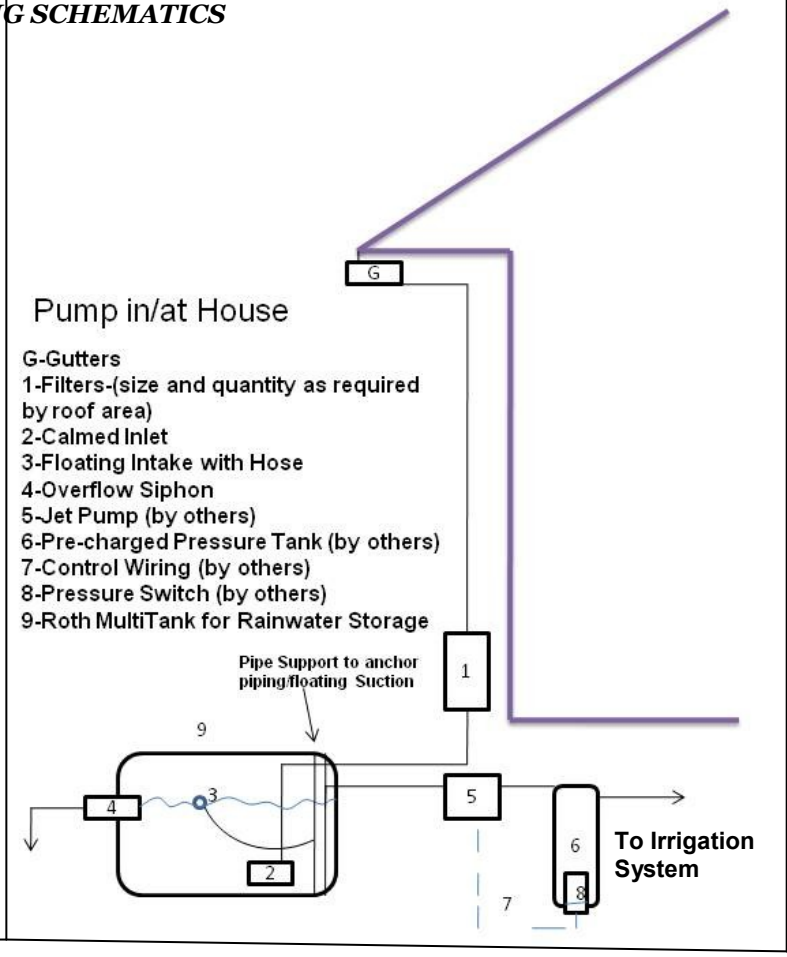
Call 866-943-7256 or visit our web site at www.roth-usa.com

Roth Rainwater Harvesting. Environmentally friendly. Financially rewarding. Smart.

- 50% or more of all potable water is used for non-potable purposes such as irrigation, car washing and toilet flushing
- The average US household consumes about 70,000 G/year of water
- Droughts and water restrictions are worsening across the US
- Earn LEEDS* credits on new construction with a rainwater harvesting system
- Keep your lawn lush, your car clean and your water bill down with Roth

TYPICAL PIPING SCHEMATICS



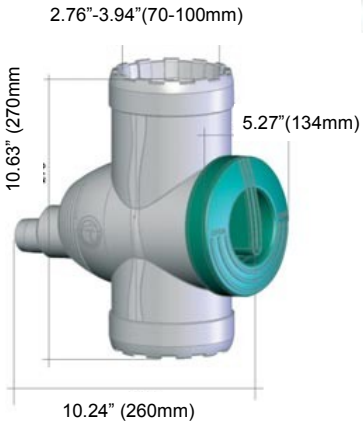


*LEED Green Building Rating System is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution. Rainwater harvesting is a significant component of the LEED Program. Depending on the application(s), underground water storage tanks can be used to fulfill several LEED categories.

The Complete Rainwater Harvesting System- from the tank to the filters

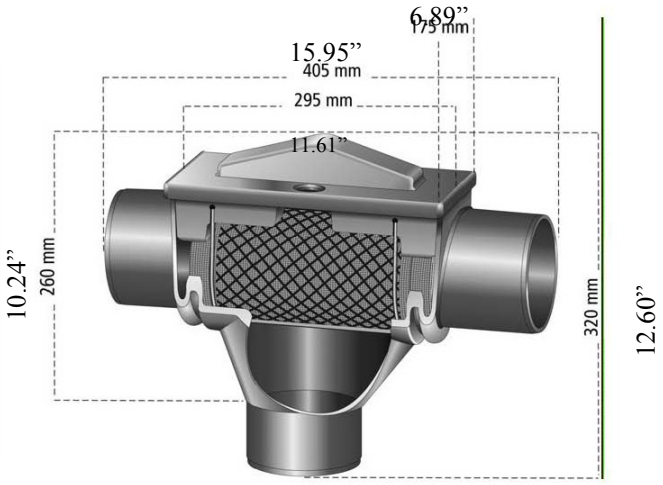
- **Filter Collector (RRW-FILCA)—–for a system up to 750 SF**

Leaves and debris that cause sludge build up and poor water quality are removed through a stainless steel mesh, allowing the cleaned water to enter the storage tank. Easy to install into existing rectangle or round downspouts. Provides side discharge of filtered rainwater. Dirt and debris continue through the downspout. Made from tough, durable, and recyclable PE plastic. Easy to maintain with removable filter cartridge.



- **Compact Filter (RRW-COMFLT) – for a system up to 2100 SF**

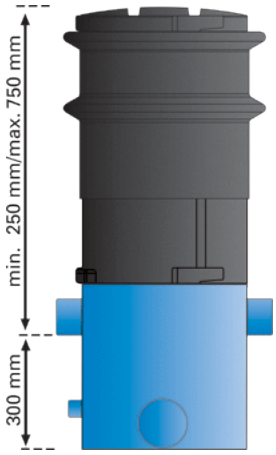
Incoming water is continuously filtered through a two stage cleaning system. The first stage removes larger debris such as leaves and other organic matter, which protects the finer second stage from cloging. After the finer particles are removed in the second stage the clean water flows into the storage tank through the calmed inlet. A small amount of water carries the dirt into the overflow of the tank. Two stage filter is easily removed for cleaning. Filter housing is made of high quality, recyclable, PE plastic, with the two stage filter material made from stainless steel. Install



By capturing water on a 1,500 square-foot roof, a family could reduce their water bill by 50 percent and save about 35,000 gallons of water yearly.

- **Volume Filter (RRW-VF150) -for systems up to 4500 SF**

Rainwater filter for small to mid-size systems where underground installation is desired. Unique dual cascade filtration provides a high level of filtering efficiency, independent of flow rate, for roof areas to 4500 sf. Self cleaning, low maintenance filter provides continuous filtering of dirt particles to .55mm. Extension tube is adjustable from 250mm to 750mm and includes a lid that will support pedestrian loading. Filter housing is frost resistant and made out of high quality, recyclable, PE plastic, with the secondary mesh made from stainless steel.



- **Calmed Inlet (RRW-CI)**

Water leaving the filter enters the storage tank through the 'calmed inlet'. The inlet prevents the disturbance and re-suspension of fine sediments that gather on the bottom of the tank. Another important function of the inlet is the introduction of oxygen into the lower layers of the tank which maintains a fresh supply of water while preventing anaerobic conditions from forming.

- **Floating Intake with hose (RRW-FSCF)**

An air-filled ball suspends the floating inlet filter just below the water surface where the cleanest water resides. A high quality 1” dia flexible hose allows for connection of the floating inlet to a pump or suction line. Filter is made out of lead-free brass with a 1.2 mm stainless steel screen and a built in check valve.

- **Standard Overflow Siphon (RRW-OVRFLW)**

Once a maximum level is reached in the tank, the innovative overflow siphon, with its skimmer effect, removes particles lighter than water (e.g. flower pollen, oils, etc.) that float slowly to the water surface. Removing this floating layer of surface pollutants through regular overflow from the tank is important in order to maintain high quality water and allowance of oxygen diffusion at the water surface. The narrow slits in the overflow siphon prevent rodents from entering the tank.

Design Consideration for Rainwater Harvesting Systems

The following suggestions are intended as a general guideline to assist in the layout, sizing, equipment selection and connection of a rainwater harvesting system. They are not intended to cover all applications or situations, but rather to direct the installer/ designer to give site and geographic considerations to these items. It is the responsibility of the system designer and installer to verify local codes and regulations prior to the installation of a rainwater harvesting system.

1. Identify ALL intended uses for the rainwater. Irrigation, occasional watering of plants/flowers, car washing, toilet flushing, etc.
2. Calculate the approximate daily usage from all identified rainwater reuse applications (gallons per day).
3. Approximate periodic rainfall in your region from any number of web-based data sources (inches per month is most common).
4. Identify how many square feet of roof area from which you intend to collect rainwater (square feet).
5. Using the table provided in this manual and the data identified in items 2, 3 and 4 above, calculate the potential volume that could be collected in a given period of time.
6. Considering the frequency of rainfall in your area and your potential for collection, determine the storage volume of tanks you want to install. Factor in whether you will entirely depend on rainwater or whether you may supplement this volume during dry periods with another water source.
7. Select location for tank storage based on ease of piping layout from downspouts, existing obstructions, connections to existing water system, ease of access for excavation, etc. Consider grading and drainage of surface water away from the tank as you select the tank location.
8. No matter how much tankage is designed into a system remember that you will ALWAYS require an overflow for those times when unexpected heavy rainfall occurs. The overflow may be connected to the local sewer line (check local codes first) or to a large gravel filled pit referred to as a soakaway.
9. Any systems for potable water (human consumption) should be designed by a professional and should consider roof material, pre-tank filtration, post-tank filtration, disinfection and regular maintenance and cleaning of the system as part of the design/care of the system.

Rainwater Collection Table (US Gallons)
(Assumes 90% Recovery Rate)

Roof SQ	Rainfall in Inches			
	.25	*.50*	*.75*	*1.0*
500	72	144	216	288
750	108	216	324	432
1000	144	288	432	576
1500	216	432	648	864
2000	288	576	864	1152
2500	360	720	1080	1440
3000	432	864	1296	1728

SUPERIOR PRODUCTS.
ENVIRONMENTALLY-FRIENDLY PROCEDURES,
MATERIALS AND INNOVATIONS.
YOUR ENVIRONMENT IS OUR BUSINESS.

Roth Rainwater Harvesting System. Water when you need it. Trust Roth not the weather.

The Roth MultiTank is ideal for collecting rainwater with sizes ranging from 535 gallon to nearly 1,800 gallon. The tanks are blow-molded, by a state-of-the-art computer controlled multi-layer machine, which guarantees a repeatable process and produces repeatable field performance that you can depend on. Roth tanks are the only underground tank on the market strong enough to withstand the repeated filling and emptying cycles of rain water collection. The tanks will not crack, are corrosion resistant, watertight, with true structural integrity-clearly the ideal choice for your rainwater harvesting system.
Roth brings over 35 years of blow molding experience to the North American market.

PART #	***DESCRIPTION***	***TOTAL VOLUME (Gallons)***	***LIST PRICE***
RMT-750-1	750 Gallon Underground Tank	1000	
RMT-1000E-1	1000 Gallon Underground Tank	1147	
RMT-1250-1	1250 Gallon Underground Tank	1469	
RMT-1500-1	1500 Gallon Underground Tank	1771	
RRW-FILCOL	Filter Collector		
RRW-COMFLT	Compact Filter		
RRW-OVRFLW	Overflow Siphon		
RRW-VF150	Volume Filter (for roof areas up to 4500 sf)		
RRW-CI	Calmed Inlet		
RRW-FSCF	Floating Intake w/ hose-1”		

Distributed by:

MID STATE Concrete Products
Santa Maria, Ca

PO BOX 219, Santa Maria, CA 93456
ph: (805) 928-2855/ fax: (805) 928-2114

Roth MULTITANK

Roth Global Plastics, Inc.