



P.O. Box 4716, Berkeley, CA 94704
Phone (510) 834-4568
Fax (510) 834-4529
contact@rcmdigesters.com
www.rcminternationalllc.com

The Advantages of RCM's Round Heated Mixed Digester

- **Flexibility For Feedstock And Management**
 - The round shape and aggressive mixing increase the ability to manage variable farm or food waste
 - How often have you seen a square mixing bowl?
- **Lower Cost Construction**
 - Cost per gallon is 35% less than solid top straight wall digester
 - Round tank walls are thinner with only one layer of steel required, vs. straight wall digester that require thick walls and 2 layers of steel
 - RCM digesters do not require costly concrete coatings to protect concrete from gas
- **Expandability**
 - Digester can be easily expanded by increasing the wall height.
 - No need to empty the digester while expanding
- **High Performance Mixing**
 - Round tank mixes better than square or rectangle tank
 - Mixers are long lasting with minimal repair
 - Aggressive propeller mixing limits sludge and crust buildup
 - Aggressive mixing lifts solids off the bottom and moves them to the exit
 - Intermittent mixing reduces electricity cost compared to continuous mixing
 - Adjustable mixer aim to address situations like hair or hay balls
 - Vary height and direction of mixer from outside the digester
 - Change direction without stopping digester operation
 - Remove for repair without shutting off or draining the digester
- **Value engineered insulation**
 - RCM insulation system costs tens of thousands less than Polyurethane foam insulation used by others
 - RCM insulation system is not destroyed to remove the digester top
 - Mice do not like the RCM insulation material as a nest site while mice like urethane foam
- **Reliable heat exchanger**
 - Precut and shipped to site
 - Installed using local labor
 - Corrosion limiting
 - Sized for expansion

P.O. Box 4716, Berkeley, CA 94704

Phone (510) 834-4568

Fax (510) 834-4529



INTERNATIONAL, LLC

www.rcminternationalllc.com

- **Why RCM uses flexible tops on digesters**
 - Long life - > 15 years
 - Insulation can be removed and reused
 - Stores biogas
 - Will inflate and deflate as gas production varies through the day and night, no need to vent
 - Allows feeding at varying rates without losing gas
 - Cover is removable to allow safe entry for cleaning
 - Seam sealing of plastic is superior to joint sealing of concrete
 - Seaming is a plastic weld, easily monitored for leaks
 - Hundreds of feet less of seams than concrete
 - Less seams means less opportunity to leak
 - Any leaks are easily repaired

- **Why RCM does not use rigid concrete tops**
 - Concrete is not flexible
 - Concrete can crack
 - Biogas that gets into cracked concrete will corrode rebar and lead to concrete failure.
 - Coating of underside of concrete top to minimize biogas corrosion of is very expensive
 - The concrete top provides no storage in gas headspace
 - Lack of storage means gas has to be used or vented and the digester has to be continuously fed to minimize gas losses to venting
 - Concrete expands and contracts with temperature - stressing joints
 - Some rigid tops are made of 2 foot wide precast sections creating a concrete joint every 2 feet the entire length of the digester
 - Concrete joints are sealed with material that can crack
 - A concrete top requires continuous or almost continuous feeding to avoid venting gas
 - A concrete top can be broken or destroyed by gas pressure
 - The interior of a digester with a concrete top when empty is a confined space subject to confined space entry rules including breathing apparatus when being cleaned out
 - A concrete roofed digester is difficult to expand, one must empty tank, excavate, demolish the endwall and construct again.
 - Leak repair is problematic
 - Insulation has to be destroyed to service the top