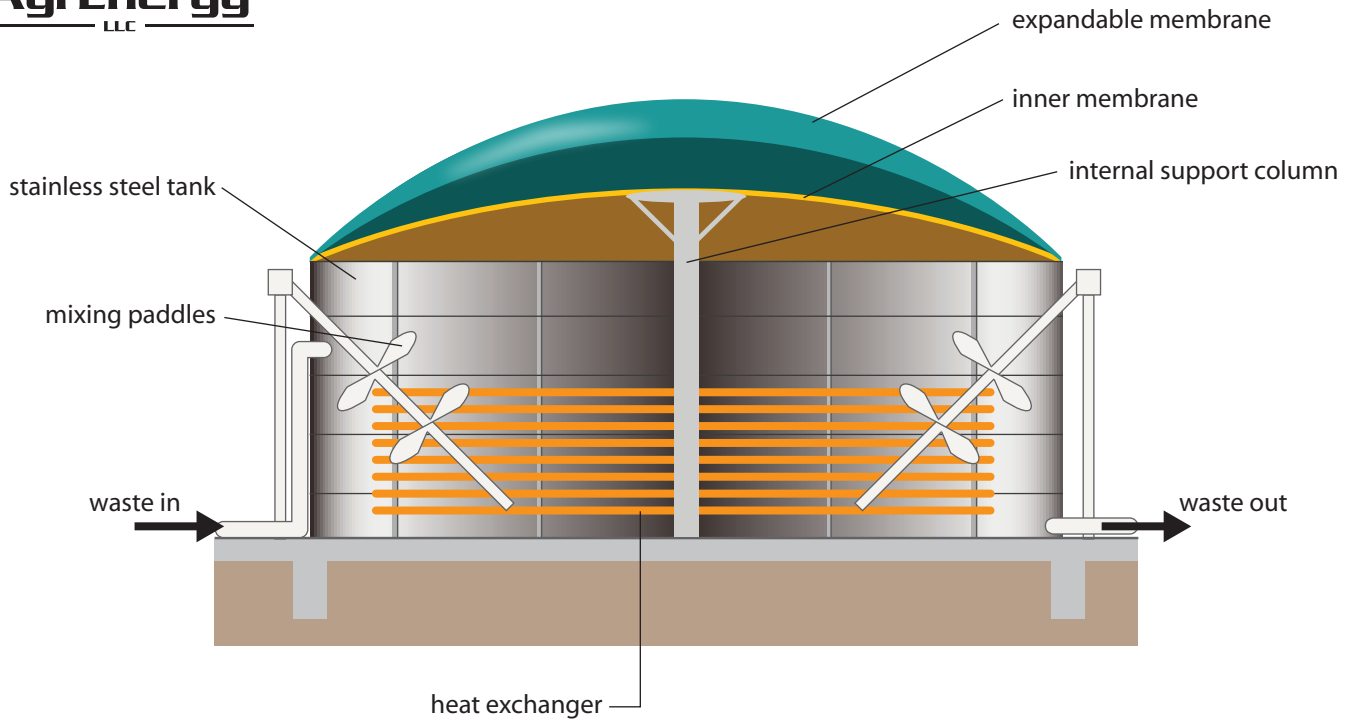




Complete Mix Digester



A complete mix organic digester is a continuous mix biogas production system. Manure moves through the system in a continuous flow. As new waste enters the tank, old waste is removed. Biogas production proceeds without any interruption from the loading of the farm waste and unloading of the effluent material.

The complete mix digester relies on anaerobic digestion to produce the methane gas from manure and organic waste. Anaerobic bacteria break down or digest organic material in the absence of oxygen and produce biogas as a waste product. In addition to the production of biogas, anaerobic digestion provides nutrient recycling, waste treatment, and odor control.

The material drawn from the digester is called sludge, or effluent. It is rich in nutrients (ammonia, phosphorus, potassium, and more than a dozen trace elements) and is an excellent soil conditioner that can be returned to the field and used as a fertilizer.

To optimize the digestion process of the anaerobic bacteria, the digester should be kept at a constant temperature. Typically, a portion of the biogas generated is used to heat the contents of the digester, or the coolant from a biogas-powered generator is returned to a heat exchanger inside the digester tank.