



#### COST EFFECTIVE SLUDGE STABILIZATION

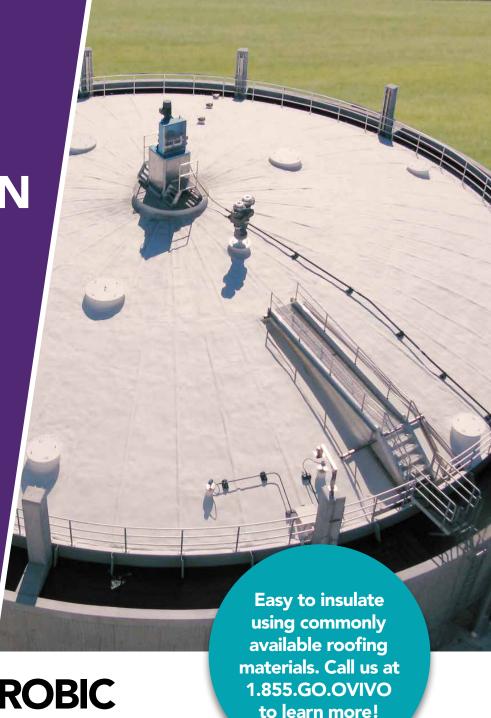
Simple installation operation & maintenance

Flexible design to suit many applications

Variable sludge storage capabilities

No moving parts for simplified maintenance

30+ year life span



# OVIVO® ANAEROBIC DIGESTER STEEL COVERS

1.855.GO.OVIVO

#### A VARIETY OF STEEL DIGESTER COVERS

Ovivo provides a variety of steel digester covers. Each cover is constructed as a dome-shaped segment of a sphere, offering maximum strength and structural integrity. The steel digester covers are radial beam designed to be erected quickly and efficiently. A thrust ring is installed at the periphery of each cover to absorb all design loads without transmitting excessive forces to the digester wall. During erection, the cover is supported by radial beams attached to a center ring and the thrust ring which add strength to the complete unit.

Our radial beam design includes the following configurations: Fixed, Gasholder, HydroSeal® type and Buoyant steel cover. Ovivo will provide the best option for each application based on the customer needs.



Spanish Fork STP, UT (50' F1) :

Fixed Steel Cover Installation



Salt Lake City WRF, UT (90' G2VL):

Gasholder Steel Cover Installation

Honouliuli WWTP, HI (90' G2VL):

Gasholder Steel Cover



DC WASA, DC (98.5' F2) :

Fixed Steel Cover



#### A NUMBER OF BENEFITS

- The use of radial beams allows the cover to be erected quickly and efficiently.
- Ovivo's cover design is compatible with all our available mixing systems to ensure adequate anaerobic digestion process.
- The covers are designed based on the requirements specified for each application, using the latest structural standards.
- A variety of accessories are available with our covers to effectively interface with the consulting engineer's design and comply with the customer requirements.

# FIXED STEEL COVER (TYPE F)



The Type F cover is the most economical steel cover. The main application is on digesters with constant water level (primary or first stage digesters). The Fixed covers can be sealed against the tank to combat odors. For this design, the side sheet should be extended below the minimum liquid level. Otherwise, two options are recommended: 1) the supplier of the filler material should confirm that it can withstand the operating pressure 2) an independent clean liquid launder should be provided that allows for a pressure seal at any given sludge level (Contact Ovivo for additional details for this option).

### GASHOLDER STEEL COVER (TYPE GV)



The Type GV uses the radial beam design structure with added side sheet and ballast for digester gas storage. Submerged ballast blocks are used to maximize cover stability and maintain adequate gas pressure. The design includes a vertical guide arrangement with guides attached to the tank wall. Guide devices, spanning from the top to the bottom of the cover side sheet, are engaged to stabilize the cover.

### HYDROSEAL® STEEL COVER (TYPE GVL)



The separate launder and liquid seal between the digester tank and the cover eliminates gas and VOC emissions, improves service access and improves the maintenance access.

This design allows variable sludge storage capabilities since the side sheet operates independent of sludge storage in clean area. No components come in contact with the sludge.

## BUOYANT STEEL COVER (TYPE B)



The Type B uses the radial beam design structure including a peripheral buoyant chamber. The cover floats directly on the digester contents. Precast concrete ballast blocks are placed to maintain a specified gas pressure. A major portion of the buoyant volume which keeps the cover afloat is located at the cover periphery; this feature provides an excellent resistance to tipping. The slide guide system will provide vertical movement without rotation or binding.

#### **EZ-RECT™ SYSTEM**

The EZ-RECT™ cover erection system is a feature with the digester cover. Ovivo offers this option to reduce the amount of field welding.

Ovivo will provide the digester cover with cover plate/radial beam sections pre-assembled and finish welding in the shop to facilitate the erection of the cover. Each assembly will consist of two (2) beams and one (1) cover plate.

#### **COVER ERECTION IS COMPLETED IN FIVE STEPS:**

- 1. Side Sheet Assembly
- 2. Center Ring and Erection Beam Installation
- 3. EZ-Rect Cover Plate Assembly Installation
- 4. Remaining Cover Plate Installation
- 5. Manholes, Spools, Tubes, Etc., Installation

#### **ANCILLARY EQUIPMENT**

Ovivo can supply all plant required equipment for a complete Sludge Treatment / Anaerobic Digestion plant, including but not limited to:

- Ultrastore™ Membrane Gasholder
- LM<sup>TM</sup> Mixer
- Eimix® Mechanical Sludge Mixer
- Sonolyzer™ Ultrasound Sludge Disintegrator





#### ovivo connect ...

Ovivo® Connect<sup>SM</sup> portal is an innovative and intuitive application that allows our customers to use 'SmartTags' installed on our equipment (or a web URL) to access a personalized customer zone. Access your equipment documentation, find contract references, track service logs, manage spare parts, and plan your next maintenance to get the most out of your equipment.

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