

Anaerobic Digester Covers



WESTECH[®]

Options to Suit Your Process



WesTech anaerobic digester covers are ideal for new and retrofit installations. These custom covers are innovatively designed by WesTech engineers who have decades of experience meeting specific customer specifications for biogas and odor containment. Incorporating the most current structural standards, WesTech covers are economical and easy to install.

Unique Features of WesTech Truss and Radial Beam Covers

- Prefabricated beam roof sections for faster installation
- Designed for tank diameters ranging from 20 - 125 ft.

Radial Beam Structure

- Fixed and Gasholder Cover Designs
- Economical Option

Beam covers are a very economical choice for anaerobic digester covers, as they have no ceiling plates and 50% less field weld length than a truss cover.



Truss Structure

- Ideal for Buoyant Cover Design
- Attic Space for Insulation

Truss covers use welded steel plates on both the top and bottom of the trusses to form an attic space, that protects the structural members from corrosion and provides insulation for the sludge.



DuoSphere™

This innovative membrane digester cover is the most versatile available, with a cost-effective tank mount design for new and replacement covers. Look for additional WesTech literature on DuoSphere technology.



Additional WesTech Options

- Geomembrane Seal
- Hinged Ballast Block Platform Design



Hinged Ballast Block Shelf



Geomembrane Seal

Types of Digester Covers

WesTech is the only company that offers each type of cover; this means the customer gets the best solution, not just what's available. WesTech has fabricated hundreds of these three types of covers:

Fixed Covers

- **No movement; they are attached to the tank**
- **Best option for small liquid level variations**
- **Most economical steel cover option**

Innovative designs incorporating a water launder or more advanced seal materials can overcome liquid level variation limitations.

A conventional annular seal design relies on the sidesheets being submerged in the sludge to achieve a pressure seal and prevent odors from escaping.



Buoyant Covers

- **Covers float on the surface of the liquid**
- **Best option for high liquid level variations**
- **Truss design increases the stability of the cover**
- **Attic space provides thermal insulation**

Buoyant floating covers are in contact with the sludge, which reduces the exposed liquid surface area and prevents a large scum blanket.



Gasholder Covers

- **Covers float on digester gas that is held under the cover**
- **Stores digester gas and maintains pressure**
- **Pressurized gas storage for optimized downstream utilization**
- **Allows for liquid level flexibility**

Gasholder covers can be constructed using radial beams, trusses, or engineered textiles, as in the case of the DuoSphere dual membrane covers.



Slide Guides for Gasholder and Buoyant covers

Slide guides allow the cover to travel above the tank wall, thus increasing gas storage at high liquid levels. WesTech's Ultra-High Molecular Weight (UHMW) polyethylene slide plates, used on three sides of the structural steel tube, prevent covers from tipping and binding as they move vertically within the tank. They resist wind, seismic, and unbalanced loads in both radial and tangential directions. The durable, low-friction UHMW surfaces remove the need for lubrication, enabling maintenance-free operation.



Advantages of WesTech Slide Guides

- **Great for retrofits and upgrades**
- **Eliminates tipping and binding**
- **Corrosion-proof slide plates**
- **No lubrication required**
- **Loads re-distributed over several guides**
- **Adjustable for easy installation and alignment**
- **Install with old cover in place**



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