

Installation Guidelines for Vault Systems (DSBB, Kraken, Water Polisher, & Other)

Delivery & Unloading/Lifting

1. Bio Clean Environmental Services, Inc. shall deliver the unit(s) to the site in coordination with the Contractor.
2. The Contractor will require spreader bars, a set of suitable lifting hooks, knuckles, shackles, and eye bolts and chains/cables to safely and securely lift the main structure and risers.

Please see project specific drawings for weights and lifting details. Contact Bio Clean for additional lifting details.

Inspection

1. Inspection of the Bio Clean vault units and all parts contained in or shipped outside of the unit shall be inspected at time of delivery by the site Engineer/Inspector and the Contractor. Any non-conformance to approved drawings or damage to any part of the system shall be documented on the Bio Clean vault shipping ticket. Damage to the unit during and after unloading shall be corrected at no cost to Bio Clean Environmental. Any necessary repairs to the Bio Clean vault units shall be made to the acceptance of the Engineer/Inspector.

Site Preparation

1. The Contractor is responsible for providing adequate and complete vault protection when the Bio Clean vault unit is installed prior to final site stabilization, such as full landscaping, grass cover, final paving, and street sweeping completed.
2. The Contractor shall adhere to all jurisdictional and/or OSHA safety rules in providing temporary shoring of the excavation.
3. The Contractor or Owner is responsible for appropriately barricading the Bio Clean vault unit from traffic in accordance with local codes.

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Installation

1. Each unit shall be constructed based on the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer. Changes to the approved drawings may incur additional charges from Bio Clean Environmental.
2. The unit shall be placed on level, compacted sub-grade with a minimum 6-inch gravel base. Compact undisturbed sub-grade materials per Geotechnical/Soils report. Unsuitable material below sub-grade shall be replaced to site engineer's approval.
3. Once the unit is set, the top section shall be sealed onto the base section before backfilling, using a non-shrink grout, butyl rubber, or similar watertight sealant.
4. Pipe connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations. The inlet and outlet will be marked separately on the Bio Clean vault.
5. Once the unit is set, the system shall be protected from construction runoff entering it. Contractor will be responsible for cleaning and replacing media, filters, screens, and internal components if unit is contaminated by such construction runoff and associated pollutants and damage (i.e. concrete wash water).
6. Backfilling shall be performed in a careful manner, bringing the appropriate fill material up in 6-inch lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of the Bio Clean vault unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility Structures" unless specified otherwise in contract documents.
7. If required, it is the responsibility of the Contractor to provide curb and gutter and transition to the Bio Clean vault unit for proper stormwater flow into the system through the throat, pipe or grate opening. A standard drawing of the throat and gutter detail is available in the following section; however the plans and contract documents supersede all standard drawings. Several variations of the standard design are available. Effective bypass for an offline Bio Clean vault unit is essential for correct operation (i.e. bypass to an overflow at lower elevation).

Installation Procedure

The contractor **MUST** provide all rigging and lifting apparatus, such as all cables, chains or straps and a set of lifting hooks, shackles, knuckles and eye bolts.



It is the contractor's responsibility to provide suitable lifting equipment to offload the Bio Clean vault. Bio Clean vaults are designed to be offloaded using the contractor's spreader bar.



1. Unload and Set Box

Unload the Bio Clean vault and set into the prepared hole with appropriate sub-grade.*

* Compacted sub-grade with a minimum of 6 inches of level gravel base.



2. Apply Butyl Tape Seal

Apply butyl tape seal along the exposed box section. Butyl tape seal is provided with every vault.



3. Set Top On Vault

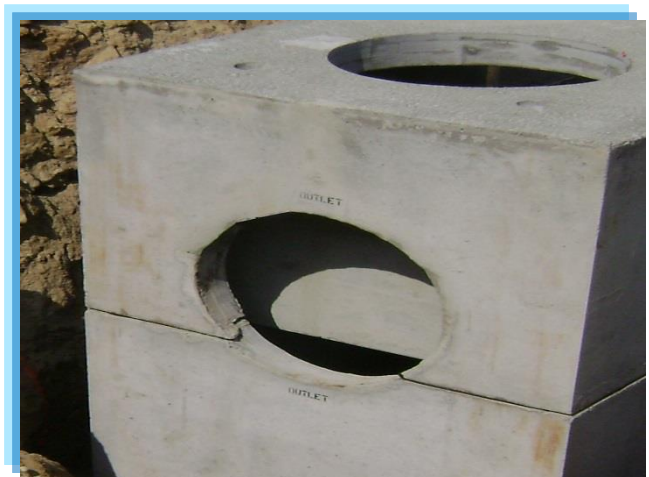
Set the top on the vault.

The Contractor is responsible for providing adequate and complete vault protection when the Bio Clean vault is installed prior to final site stabilization (full landscaping, grass cover, final paving, and street sweeping completed).



4. Connect Pipes

The inlet and outlet pipe openings will be marked on the Bio Clean vault.



Curb and Gutter Details



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Connection Details



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