Installation Instructions for EZ*flow* Systems in Indiana

The Indiana State Department of Health approved the use of innovative Infiltrator Systems Inc. manufactured **EZ***flow* drainfields as an alternative gravelless trench system. **EZ***flow* drainfield sites must meet *Specifications, On-Site Evaluation, System Selection, and Design Standards* requirements, as noted in *Rule 410 IAC 6-8.2, Residential Onsite Sewage Systems,* or *410 IAC 6-10, Commercial Onsite Wastewater Disposal*, as applicable.

EZ*flow* 1203H and may be used in subsurface trench soil absorption field systems using gravity flow, alternating fields, flood dosing, or pressure distribution.

Trench excavations for the 1203H must be 36 inches in width.

Prior to installation, Infiltrator Systems Inc. must certify installers in writing as having passed **EZ***flow* Certification Training.

Materials and Equipment needed

- **EZ***flow* Bundles
- **EZ***flow* Geotextile Barrier Material that meets Rule 410 IAV 6-8.2-66
- **EZ***flow* Internal Pipe Couplers
- Pipe for Header and Inlet
- Backhoe
- Level and Rod

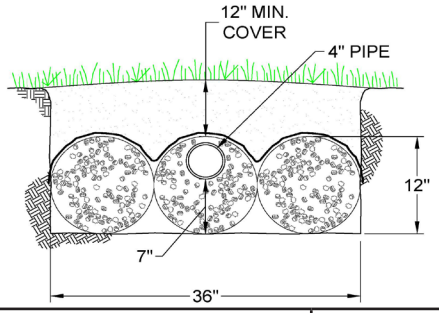
System Sizing

1. **EZ***flow* Drainage System is designed to be installed in any application where a subsurface gravel-filled trench system is allowed.

2. A permit for each individual system must be obtained from the health department having jurisdiction prior to start of construction.

3. The absorption field size must be calculated using the design daily flow and the soil loading rates for subsurface absorption systems set by the department in Rule 410 IAC 6-8.2 or 6-10, whichever is applicable.

4. The size of the **EZ***flow* 1203H soil absorption field may be installed at a reduction of up to 25 percent of a full sized soil absorption field as required in 410 IAC 6-8.2 or 6-10.



Approved Sizing	4 SF/LF

System Sizing Example:

3 bedroom residence
Soil loading rate = 0.30 gpd/ft2
Daily flow = 3 bedrooms x 150 gpd per bedroom = 450 gallons per day
Minimum system size = 450 gallons per day / 0.30 gpd/ft2 * (1-0.25 sizing factor) = 1,125 ft2
Minimum trench length = 1,125 ft2 / 3-ft-wide trench = 375 lf

Installation Instructions

The instructions for installation of **EZ***flow* products are given below, **EZ***flow* drainfield sites must meet the *Specifications, On-Site Evaluation, System Selection, and Design Standards* requirements, for residential and commercial systems, as noted in Rule 410 IAC 6-8.2 or 6-10, as applicable.

1. After the health department having jurisdiction has determined sizing, configuration, and layout for the **EZ***flow* system, stake or mark with paint the location of trenches and lines. Be careful to set correct tank, invert pipe, header line or distribution box and trench bottom elevations before installation of the pipe bundles.

2. Trenches in a soil absorption field must be equal in length and no trench may exceed 100 feet in length. In cases where linear footage required per trench is not in a multiple of 10, the installer may: (a) reduce the last bundle in each trench to the needed length and refasten the netting to the pipe or, (b) extend the last bundle beyond the trench length required (not to exceed 10 feet).

3. Geosynthetic bundles resized in the field must be according to the manufacturer's instructions for cutting and reassembly. End straps holding the netting may be cut or the netting may be cut from the strap and the netting pulled back to the needed length. The four-inch perforated pipe is then cut and the netting restrapped around the pipe with an equivalent strap.

4. Except for soil absorption fields using pressure distribution, each soil absorption field trench must be individually connected to the distribution box by at least five (5) feet of four (4) inch gravity non-perforated effluent sewer.

5. Effluent sewers from distribution box to the absorption trench(es) must be installed with a positive slope.

6. Excavate the trench(es) to the permitted width and depth. Trenches must be installed during conditions that preclude sidewall and bottom smearing.

7. Soil absorption fields must not be constructed during periods when soil is sufficiently wet so as to exceed its plastic limit. Dept. of Health decribes necessary tests in 410 IAC 6-8.2.

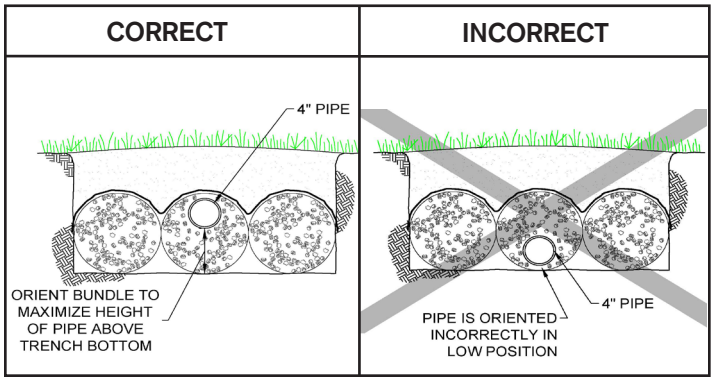
8. Trenches must be at least 7.5' apart, measured on-center.

9. Trenches must be designed and installed along contour lines, so the trench bottoms will remain at a constant depth relative to the ground elevation. Each soil absorption field trench must be level throughout its length.

10. Remove plastic **EZ***flow* shipping wrap prior to placing bundles in the trench(es). Remove any plastic wrap from the trench before the system is covered.

11. Place the first bundle(s) in the trench with the pipe-containing bundle in the center and aggregate-only bundles along the sidewalls of the trench. Geosynthetic aggregate bundles must maintain the complete width and length of the infiltrative surface.

12. Each effluent sewer must connect to the pipe-containing bundle of the absorption field trench. The bundle with four-inch perforated pipe must be positioned so that the portion of the bundle with the greatest dimension is located below pipe, regardless of location of three pipe holes. Refer to the illustration below for proper pipe-containing bundle placement.



13. Each section of four-inch perforated distribution pipe in the absorption field trenches must be connected to the next section of pipe throughout the length of each soil absorption trench. Gaps are to be minimized along the length of the geosynthetic aggregate bundles. Using only manufacturer-approved internal pipe couplings will minimize any gaps. The perforated distribution pipes are joined end-to-end with approved internal pipe couplings.

14. Connect and place additional geosynthetic aggregate bundles with pipe in trenches until required linear footage has been obtained. Any torn netting that compromises the integrity of the bundle, must be replaced or repaired. This can be easily accomplished in the trench by using straps or similar material to pull the netting back together or by using similar netting over the tear.

15. The distal ends of the soil absorption field trenches may not be manifolded together. The distal end of each of the four-inch perforated distribution pipes in the absorption fields must be capped with end caps. Gaps are to be minimized at the ends of the four-inch perforated distribution pipes. Using only manufacturer-approved end caps will minimize any gaps.

16. The geotextile fabric used as a barrier material must meet the minimum specifications barrier material in 410 IAC 6-8.2-66 and must extend the full width and length of the trench, before and during backfilling. Geosynthetic aggregate bundles should be covered across the top only to prevent closure of voids with earth backfill.

17. The absorption field trenches must be covered with a minimum of twelve (12) inches of soil material.

18. The soil cover must be crowned or sloped over the absorption field so as to promote surface runoff.

19. Construction vehicles should only drive across trenches when necessary and should never drive down the length of trenches.

20. Keep heavy vehicular traffic off of the completed trench area to avoid additional compaction of soil.

21. Sod or seed the drainfield area, to control erosion, as may be required by permit or local policy.

Repeat steps 1 thru 21 for each required trench.

Flood Dosed or Alternating Fields

Flood Dosed and Alternating systems shall comply with 410 IAC 6-8.2-73 and 74, respectively and may be used if the loading rate is between 0.25 and 0.75 gallons per day per square foot inclusive and trench bottoms are at least 24 inches above the limiting zone (<450 gpd). A dosed system is required for systems with more than 500 lf of trenches.

Pressure Distribution

Pressure distribution systems shall comply with 410 IAC 6-8.2-75. For pressure distribution systems, sleeve the pressure distribution pipe inside of the corrugated 4" pipe of the bundles. Use internal pipe connectors to connect the pipe-containing bundles. The holes in the pressure distribution laterals must face up, except for at least one hole facing downward for drainage.

EZ*flow* System Inspection

As required by state or local regulations, be sure to obtan proper installation inspection and authorization from the health department having jurisdiction prior to covering the system.

Septic Tank header pipe or D-box trench bottom grade depth and cover shall be in accordance with state rules and regulations unless otherwise specified.

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