



Rick Scott
Governor

Steven L. Harris, M.D., M.Sc.
Interim State Surgeon General

March 21, 2012

Mr. Harry Bussey
ICC Technologies
240 Boundary Road
Marlboro, NJ 07746

Re: Flowtech™ alternative drainfield

Dear Mr. Bussey:

This office has reviewed your approval request and the design manual for the FTSG 123H-1 OC product for use in Florida as alternative onsite sewage disposal systems. A variance was granted for this product design on March 21, 2012, allowing that the product be considered for approval without being required to meet the provisions of Chapter 64E-6.009(7), Florida Administrative Code (FAC), which requires approval of system components not addressed in the rule to be preceded by innovative system testing, Chapter 64E-6.009(7)(a)4., FAC, which requires requests for approval to include results from innovative system testing conducted in the State of Florida, and Chapter 64E-6.009(7)(d), FAC, which prohibits approval of a product that results in a smaller drainfield than would be required using mineral aggregate.

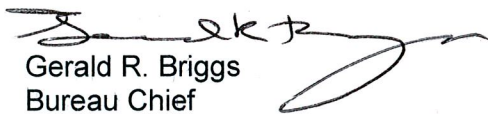
The alternative drainfield product is approved with a rating equivalent to four square feet of aggregate per linear foot of product when compared to the gravel system loading requirements. Please annotate your Florida installation manual with an approval date to facilitate the tracking of changes to the manual.

Please recognize that an approval of your product does not allow this product to be installed out of compliance with rule requirements in Chapter 64E-6, Florida Administrative Code.

A copy of the performance warranty (minimum of two years) shall be provided to each homeowner/builder.

If you have any questions regarding this approval, contact Eberhard Roeder.

Sincerely,


Gerald R. Briggs
Bureau Chief
Attachment: Notice of Rights



NOTICE OF RIGHTS TO APPEAL

A party whose substantial interest is affected by this order may petition for administrative hearing pursuant to Sections 120.569 and 120.57, Florida Statutes. Such proceedings are governed by Chapter 28-106, Florida Administrative Code. A petition for a hearing must be in writing and must be received by the Agency Clerk for the Department within twenty-one (21) days from the receipt of this order. The address for the Agency Clerk is 4052 Bald Cypress Way, Bin # A02, Tallahassee, FL 32399-1703. The Agency Clerk's facsimile number is (850) 410-1448.

Mediation is not available as an alternative remedy.

Your failure to submit a petition for hearing within 21 days from receipt of this order will constitute a waiver of your right to an administrative hearing, and this order shall become a "final order".

Should this Order become a Final Order, a party who is adversely affected by it is entitled to judicial review pursuant to section 120.68, Florida Statutes. Review proceedings are governed by the Florida Rules of Appellate Procedure. Such proceedings may be commenced by filing one copy of a Notice of Appeal with the Agency Clerk of the Department of Health and a second copy accompanied by the filing fees required by law with the Court of Appeal in the appropriate District Court. The notice must be filed within 30 days of the rendition of the final order.

FLOWTECH® DRAINAGE UNITS

Manufactured with 100% Recycled Artificial Aggregate

Manufactured by

ICC TECHNOLOGIES, LLC

MARLBORO, N.J.

1-877-422-3569

STATE OF FLORIDA INSTALLATION MANUAL

February 2012

Flowtech® Installation Instructions – Florida Specific Guidelines:

General standards for onsite sewage treatment and disposal systems per State of Florida Department of Health (DOH) under Chapter 64E-6 of the Florida Administration Code shall be followed.

1. Only Flowtech model FTSG 123H-1 OC is approved for use in the State of Florida.
2. A construction permit for each individual system must be obtained from the health department having jurisdiction prior to the start of construction.
3. The Flowtech® Drainage System is designed to be installed in any application where a standard subsurface drainfield system is allowed. It may also be used in mound and fill applications. It is not intended for use in areas where subsurface absorption field systems would be prohibited due to poor permeability, high groundwater, or insufficient depth to bedrock or other limitations.
4. The absorption field size must be calculated using the estimated sewage flows and the soil loading rates for drainfield systems set by the department in Chapter 64E-6 in the Florida Administrative Code, Standards for Onsite Sewage Treatment and Disposal Systems. One (1) linear foot of Flowtech® FTSG 123H-1 OC is equivalent to 4.00 sq. ft. of mineral aggregate.

Flowtech® Installation Instructions – General Guidelines:

Prior to installation, ICC Technologies Flowtech® or its representatives must certify the installers of Flowtech® as having passed the Flowtech® Certified Training Program.

The Flowtech® Drainage System comes in a 12-inch diameter, 5-foot, 10-foot, and/or 20-foot long cylinders. See description and sketches attached on pages 3-4, D-1, and D-2.

Should the case arise where the length of the Flowtech® bundle has to be adjusted, the individual cylinder units may be cut and ends be refastened or 5-foot pieces may be ordered from the factory. See section titled “Repairs, Modifications, and Maintenance” on pages 2 and 3.

1. Before installing the Flowtech® Drainage System, the infiltrative surface should be level in all directions (both across and along the infiltrative surface bottom) or with a downward slope not exceeding 1-inch per 10-feet with all continuous adjoining cylindrical bundles placed end to end, with central cylinder distribution pipe interconnected, without any dams, stepdowns or other water stops.

Trench systems shall have a minimum 24-inch separation between the sidewalls of adjacent trenches, unless otherwise specified.

2. The plastic wrap or bag should be removed before the three-cylinder bundles are placed in the trenches or beds with the geotextile in the up position.

3. Place Flowtech® unit(s) in the Flowtech® configuration approved by system design permit specified for the particular site. The center-most cylinder containing pipe is joined end to end to the pipe in the incoming bundle's center cylinder with an internal pipe coupler. Aggregate cylinders with no pipe shall be butted against the other aggregate cylinders with no pipe and do not require any type of connection.
4. The center-most Flowtech® cylinder in the first bundle at the head of the trench or bed shall be connected to the distribution box or header pipe.

At the distal end of the system, distribution pipes within each Flowtech® bundle must be connected in a continuous circuit, capped, or sealed in accordance with 64E-6;

Note: The Flowtech® Drainage System may be used in gravity fed, dosed, lift dosed, and low-pressure distribution systems. In low-pressure dosed systems, the small diameter pipe is placed within the distribution pipe in the center cylinder of each bundle. All sections of 64E-6 apply.

5. Flowtech® EPS units can flex and fit in curved trenches as may be necessary to avoid trees, boulders, or other obstacles in the way.
6. Flowtech® products with a "G" preface have 180 degrees of geotextile and 180 degrees of net with flanges. These units should be installed so that the side flanges are bent up, then placed in a downward motion along the trench side or the unit already in the trench. These flanges will deter soil from infiltrating between individual cylinders or sidewalls when backfilling. The geotextile will act as a barrier to prevent the soil from infiltrating the system and should always be in the up position.

Note: All components of the FTSG 123 H-1 OC three-cylinder bundle should be installed with the geotextile in the up position. The geotextile on the center cylinder includes product identification imprinting that should be visible prior to backfilling. This printing will consist of "Flowtech® FTSG 123H-1 OC ICC Technologies 877-422-3569".

7. Install cover material. The soil cover over the leaching field should be at least 6-inches in depth.

Repairs, Modifications, and Maintenance:

The Flowtech® Drainage System may be used in the repair and/or modification of an existing drainfield.

For repairs and modifications, Flowtech® may be installed in a system comprised of different drainfield media. However, it cannot be directly connected to a different product in the same drainfield line; it must be installed independently in its own line. In bed configuration, lines of different products may be placed side-by-side.

Cutting: Should the length of a given line of Flowtech® FTSC 123 H-1 OC need to be cut, the following steps should be followed with each cylinder:

- The contractor should pre-determine the length of that bundle that is needed;
- The cylinders should be “tied-off” (tourniquet-style) at this predetermined length;
- The string at the end of the taper at the end of the cylinder should be cut;
- The EPS beads from the tie-off to the end are removed;
- The geotextile and netting are cut back to the appropriate length;
- Using non-corrosive string, the original tourniquet-style tie-off is replaced with a permanent tie-off; and
- The distribution pipe is cut to the appropriate length.

Maintenance: The Flowtech® Drainage System requires no maintenance. The septic tank should be pumped regularly. “Jetting”, and use of products that inject air into the drainfield in an attempt to renovate flow, are not recommended. Contact ICC with questions about use of these types of products.

PRODUCT DESCRIPTION

The following is a description of our Flowtech® system product approved for use in the State of Florida:

- 1) ICC Flowtech® FTSG 123H-1 OC Horizontal Drainage System consists of three, 12-inch diameter cylindrical units – one with a 4-inch diameter perforated plastic pipe surrounded by Flowtech® 100% recycled EPS aggregate and encased with 180 degrees each of netting and 180 degrees of geotextile and two units without pipe. These units will each have flanges so as to deter the soil from falling between units and between unit and trench walls. The geotextile and netting will be strong enough to retain the shape of the units during system installation and backfilling. The perforated flexible plastic pipe shall meet ASTM F 405 Standard Specifications for Corrugated Plastic Pipe. Each pipe unit will be connected with an internal coupling to allow flow from one unit to the next. (See product drawing)

The Flowtech® Drainage System utilizes wastewater absorption trenches that contain units of loosely bound 100% recycled expanded polystyrene (EPS) in place of rock aggregate. The aggregate shall consist of “ICC Flowtech® aggregate shapes” recycled EPS with a particle density of 1.0 pound per cubic foot, or greater, ranging in size from one-half inch (1/2”) to two-inches (2”) across any axis. When using the product with off center pipe (OC), as approved in Florida, the unit shall be placed in the trench with 6-inches of aggregate under the pipe.

Cylindrical units are a nominal 12-inch diameter. The length of the cylindrical units range from a minimum of 5 feet to a maximum of 20 feet but are usually used in 10-foot lengths. The 100% recycled expanded polystyrene (EPS) aggregate is held in a cylindrical shape with high strength polyethylene netting and geotextile. The netting and geotextile fabric shall be strong enough to retain the shape of the units during system installation and backfilling, corrosion resistant, and of

a mesh size to prevent loss of aggregate. At least one cylindrical unit shall contain a perforated flexible plastic pipe for connection to adjacent sections to form a continuous absorption field system. The perforated flexible plastic pipe shall meet ASTM F 405, Standard Specifications for Corrugated Polyethylene Pipe. A series of three holes 5/8" in diameter spaced 120 degrees around the circumference are located every 4 inches along the lateral length of the pipe. Based on the manufacturer's recommendation, the hole orientation during installation may be random.

Each three-cylinder bundle of Flowtech® FTSG 123H-1 OC includes identification. The identification is printed on the top of the center bundle geotextile, and reads:

"Flowtech® FTSG 123H-1 OC ICC Technologies, LLC 1-877-422-3569"

DESCRIPTION OF PRODUCT CODE

FTSG 123H-1 OC

FTS G 12 3 H-1 OC

Flowtech® System - 180 Degrees Geotextile - 12" Diameter - 3 Pcs. - Horizontal 1 Pipe - Off Center

"FTS" = denotes that this is the "Flowtech® System".

"G" = denotes that "geotextile" is integrated into each cylinder. The encasement material is comprised of 180 degrees of geotextile and 180 degrees of netting. [Without the "G", the encasement material is all net, and geotextile or other barrier material must be placed atop the system prior to backfilling.]

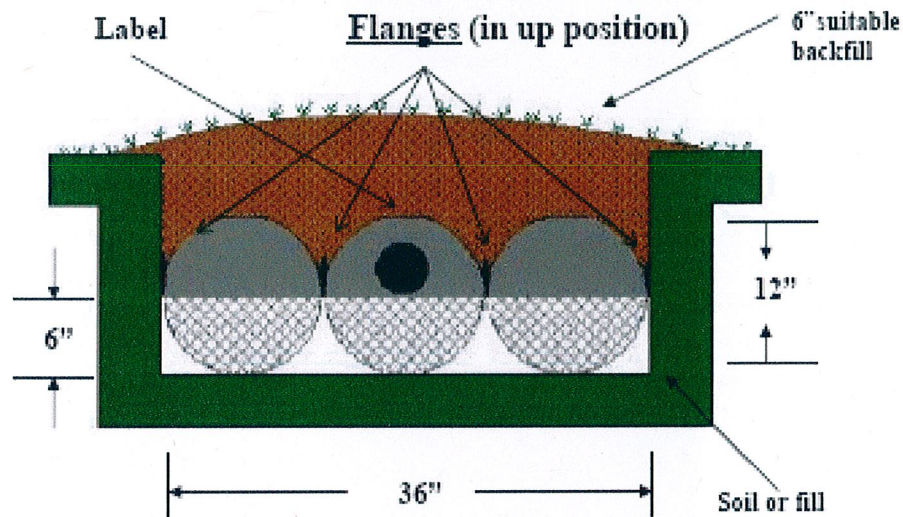
"12" = denotes individual cylinder circumference of 12-inches.

"H-1" = denotes that:
(1) individual cylinders are bundled in a horizontal configuration, and
(2) one of the cylinders contains a distribution pipe.

"OC" = denotes distribution pipe is offset with at least 6-inches of aggregate below the invert of the pipe.

**ICC Flowtech® On Site Drainage Systems for the
State of Florida**

**TRENCH
FTSG 123 H-1 OC**



Specification

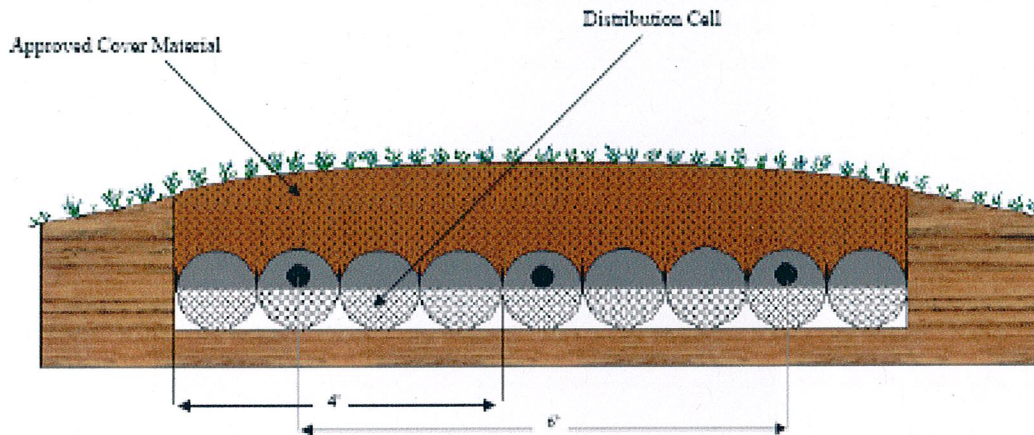
Overall System Height	12"
Invert Height	6"
Trench Width	36"
Trench Depth	18"
Trench Modification	25%

Example: 300 SF Design
300 SF : 4SF/LF = 75 LF required

**ICC Technologies 240 Boundary Road Marlboro, New Jersey 07746
Tel: 1-877-422-3569 Fax: 732-683-9911**

ICC Flowtech® Drainage Unit for the State of Florida

BED
FTSG 123 H-1 OC
(X3)



Notes:

- May be used in subsurface, mound, or fill application;
- End of distribution pipes shall be (1) connected in a circuit, (2) capped, or (3) sealed in accordance with 64E-6;
- 6" minimum cover required, not including grass cover;
- In mound or fill applications:
 - o top of installation should be contoured to divert water away from drainfield;
 - o cover material should be slightly to moderately limited soil;
 - o four-foot (4') shoulder required on all sides; and
 - o for additional vegetation requirements refer to 64E-6.

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