



COLORADO

Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

September 3, 2015

David Lentz, P.E., Regulatory Director
Infiltrator Water Technologies, LLC
4 Business Park Rd.
P.O. Box 768
Old Saybrook, CT 06475

Subject: Infiltrator Water Technologies Proprietary Distribution Product; Chamber Acceptance
For Use in Colorado On-site Wastewater Treatment Systems

Dear Mr. Lentz:

Pursuant to section 43.13 of the On-site Wastewater Treatment System Regulation 5 CCR 1002-43 (Regulation 43), the Water Quality Control Division (Division) has reviewed drawings and specifications received July 23, 2015 for the proprietary distribution products noted below.

The products noted below are accepted as proprietary distribution products for use as a component of an on-site wastewater treatment system (OWTS) subject to the design criteria in Table 1. This acceptance is not intended as an endorsement or third-party certification of the product.

This acceptance addresses the following manufactured chamber units:

- Quick4 Plus, High Capacity
- Quick4 Plus, Standard
- Quick4 Plus, Std. Low Profile
- Quick4, Equalizer 36
- Quick4, High Capacity
- Quick4, Standard
- Arc 24
- Arc 36:
- Arc 36, High Capacity
- Arc 36, Low Profile
- BioDiffuser, High Capacity

This acceptance applies only to OWTS with design capacity less than or equal to 2,000 gallons per day (gpd). **Review and approval for the design of any OWTS proposing to use this product will be reviewed by the local public health agency.** As individual local public health agency regulations may be more stringent than Regulation 43, the Division cannot ensure the acceptance of a distribution product within any given jurisdiction.

Any modifications to the physical attributes or characteristics of this distribution product must be submitted to this office for review and acceptance by the Division prior to sale in Colorado. The Division will review modifications, any additional third party verification reports and issue a revised acceptance letter, or denial, as appropriate.



Table 1. Design Criteria for the noted Infiltrator Water Technologies Chamber units as a Distribution Product:

Design Criteria
<ol style="list-style-type: none">1. A septic tank consistent with section 43.9(A) and 43.9(B) must precede the distribution product to remove scum, solids, and other floating debris. Pretreatment for non-residential kitchens must include adequate separate grease separator tank(s) prior to the primary septic tank(s) as required in section 43.9(J) of Regulation 43.2. The design of an OWTS utilizing chamber units for distribution shall adhere to the following criteria:<ol style="list-style-type: none">a. The required design flow shall be determined based on daily flow requirements defined in local OWTS regulations consistent with section 43.6(A) of Regulation 43.b. The total soil treatment area square footage required shall be determined consistent with section 43.10(C) of Regulation 43 for TL1 or the appropriate quality of effluent (treatment level) being applied.c. The length and width of trench and bed systems must comply with the appropriate sections of Regulation 43 or local regulations as appropriate.d. To determine the number of chamber units:<ol style="list-style-type: none">i. For bed installations, the number of chambers used in a soil treatment area is determined by the length and width of the specific product. The chambers shall be abutted end-to-end. The maximum separation between chamber rows is 6 inches.ii. For trench installations, the number of chambers used in a soil treatment area is determined by the length and width of the specific product and section 43.13(E)(1)(d) of Regulation 43, which states in part:<p style="text-align: center;"><i>“If the width of a proprietary manufactured distribution product is within 90 percent of the width of the excavation, it may be approved as being equivalent to the full width of the excavation...”</i></p>The chambers shall be abutted end-to-end.e. A final soil cover over the EZflow of 12 to 18 inches of a soil type 1 or soil type 2 material is recommended; crowned to promote surface runoff.3. As per the specifications noted in Table 10-3 of Regulation 43, the required soil treatment area may receive an adjustment factor of 0.7 when an accepted chamber unit receives TL-1 effluent. This adjustment may not be applied when the accepted chamber unit receives TL-2 or higher effluent.4. Reductions in soil treatment area size shall be as described in section 43.10(C)(4) of Regulation 43. The design may include distribution of effluent by gravity or pressure dosing. Note that the use of various distribution products in a design claiming a higher level treatment designation is strictly dependent on a separate treatment product prior to the distribution product and the rating identified in the acceptance for that treatment product.

5. Design flow shall be for maximum occupancy. Design flow for single-family residential designs may vary based on the regulations adopted by the local board of health for the design location. Design flow values and strengths for multi-family and commercial systems shall be consistent with section 43.6(A)(4). Therefore, all design criteria in this acceptance are based on total gallons per day and the assumption of residential strength wastewater.
6. In addition to these design criteria, other provisions of Regulation 43 and local regulations also apply to a specific design as well as good OWTS design practice. The Division does not approve manufacturer design manuals. Manufacturer provisions shall not be applicable if those provisions are not consistent with Regulation 43, these design criteria, and the regulations adopted by the local board of health for the design location. Local public health agencies will review proposed designs to confirm consistency with Regulation 43, these design criteria, the local board of health regulations adopted pursuant to Regulation 43, and good OWTS design practice.
7. Monitoring of the system may be required by the regulations adopted by the local board of health for the design location.
8. Design shall provide access at grade to any distribution or drop boxes as described in section 43.9(E) and (F). All risers and lids shall be watertight and secure. Design shall follow distribution requirements in section 43.10(D) of Regulation 43 including, but not limited to, line lengths, bed widths, inspection ports, cleanouts, etc.

The owner of the OWTS is responsible for arranging proper design, operation, and maintenance of the OWTS.

If you have any questions regarding the Division's review or findings, please contact me at (303) 692-2366 or chuck.cousino@state.co.us.

Sincerely,

Charles J. Cousino, REHS
On-site Wastewater Treatment System Coordinator
Engineering Section
Water Quality Control Division
Colorado Department of Public Health and Environment

cc: Eric Berquist; Infiltrator Systems Senior Sales Representative
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