



Quick4 Chamber and EZflow Trench Sizing 2015 South Carolina General Assembly Amendments

Effective June 1, 2015, the South Carolina General Assembly amended certain requirements for installing gravelless systems, which include Infiltrator's Quick4 chamber and EZflow products. The 2015 amendments were established through House Bill 3646, updating requirements established by House Bill 3939 in 2003.

Key elements of today's Quick4 chamber and EZflow regulation include:

- **Allowable uses** – Expanded applications include large on-site wastewater systems generating 1,500 gallons per day and community, cluster, and commercial wastewater systems.
- **Sizing** - Products receive a 25% reduction compared to their gravel trench equivalent. The only exceptions are the Quick4 Plus Standard LP chamber and EZflow 1003H, which continue to be sized at a 15% and 10% reduction, respectively.
- **Installer certification** – Installation technicians continue to require licensure by DHEC under Regulation 61-56.1, and certification by Infiltrator.
- **Warranty** – Infiltrator provides a 1-year limited warranty for gravelless products. Contact Infiltrator for details.
- **Rule applicability** – Unless otherwise stated in House Bill 3646, requirements set forth in R.61-56, Onsite Wastewater Systems, apply to Quick4 chamber and EZflow system design and installation.

Critical Installation Procedures

These guidelines must be followed during installation. Contact Infiltrator for complete installation documents.

- If possible, avoid driving equipment over the drainfield.
- Avoid direct contact with chambers and EZflow when using construction equipment. Gravelless products require a 12-inch minimum of compacted cover to support an H-10 AASHTO wheel load rating (16,000 lb/axle).
- Stabilize the soil fill along the chamber sidewalls by walking along the edge of trench and chambers.
- Only drive across the trenches when necessary. Infiltrator suggests using tracked equipment. If driving over the drainfield is necessary, always drive across, as opposed to down the length of the trenches. For wheeled equipment, provide 18 inches of cover over top of product before traversing.
- To avoid soil compaction and the potential for product damage, never drive heavy vehicles over the completed system.
- When backfilling, remove stones 3 inches and larger that are in contact with chambers and EZflow.
- Rake the bottom and sides of the trench if smearing has occurred while excavating.
- Do not use the bucket teeth to rake the trench bottom.

Note: *Raking to eliminate smearing is not necessary in sandy soils. In fine textured soils (silts and clays), avoid walking in the trench to prevent compaction and loss of soil structure.*

June 2015

System Sizing – Quick4 Standard and Quick4 Plus Standard Chambers

June 2015

Table 1: Quick4 Standard and Quick4 Plus Standard Sizing for 36"W x 14"H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36"W x 14"H (3.00 SF/FT)			Quick4 Standard and Quick4 Plus Standard = 34"W x 12"H x 48"L (4.00 SF/FT = 25% reduction)					
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms		3 Bedrooms		4 Bedrooms	
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	100	120	160	100	25	100	25	120	30
0.9	133	100	133	178	100	25	100	25	136	34
0.8	150	100	150	200	100	25	116	29	152	38
0.7	171	114	171	229	100	25	132	33	172	43
0.6	200	133	200	267	100	25	152	38	200	50
0.5	240	160	240	320	120	30	180	45	240	60
0.4	300	200	300	400	152	38	228	57	300	75
0.3	400	267	400	533	200	50	300	75	400	100
0.2	600	400	600	800	300	75	452	113	600	150
0.1	1,200	800	1,200	1,600	600	150	900	225	1,200	300

Table 2: Quick4 Standard and Quick4 Plus Standard Sizing for 36"W x 9"H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36"W x 9"H (2.31 SF/FT)			Quick4 Standard and Quick4 Plus Standard = 34"W x 12"H x 48"L (3.08 SF/FT = 25% reduction)					
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms		3 Bedrooms		4 Bedrooms	
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	104	156	208	100	25	120	30	156	39
0.9	133	116	173	231	100	25	132	33	176	44
0.8	150	130	195	260	100	25	148	37	196	49
0.7	171	149	223	297	112	28	168	42	224	56
0.6	200	173	260	347	132	33	196	49	260	65
0.5	240	208	312	416	156	39	236	59	312	78
0.4	300	260	390	520	196	49	296	74	392	98
0.3	400	347	520	693	260	65	392	98	520	130
0.2	600	520	780	1,040	392	98	588	147	780	195
0.1	1,200	1,040	1,560	2,080	780	195	1,172	293	1,560	390

Table 3: Quick4 Standard and Quick4 Plus Standard Sizing for 36"W x 6"H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36"W x 6"H (2.00 SF/FT)			Quick4 Standard and Quick4 Plus Standard = 34"W x 12"H x 48"L (2.67 SF/FT = 25% reduction)					
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms		3 Bedrooms		4 Bedrooms	
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	120	180	240	100	25	136	34	180	45
0.9	133	133	200	267	100	25	152	38	200	50
0.8	150	150	225	300	116	29	172	43	228	57
0.7	171	171	257	343	132	33	196	49	260	65
0.6	200	200	300	400	152	38	228	57	300	75
0.5	240	240	360	480	180	45	272	68	360	90
0.4	300	300	450	600	228	57	340	85	452	113
0.3	400	400	600	800	300	75	452	113	600	150
0.2	600	600	900	1,200	452	113	676	169	900	225
0.1	1,200	1,200	1,800	2,400	900	225	1,352	338	1,800	450

Notes

1. Per South Carolina law, the minimum required square footage for any drainfield system sized according to these tables is 300 square feet, measured as the area bounded by the trench width and length, for soils in all classifications.
2. To calculate additional bedrooms, multiply the number of bedrooms by the applicable absorption area per bedroom, divide by the chamber equivalency rating shown above, and divide by the chamber length. Example: 5 bedrooms x 200 sf/bedroom / 4.0 sf/ft equivalency rating / 4 ft/Quick4 Standard chamber = 62.5 chambers, rounded up to 63 chambers.

Contact John Ford of Infiltrator Water Technologies at (888) 511-6072 for additional technical and product information.

Table 4: Quick4 Plus Standard LP Sizing for 36”W x 14”H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36”W x 14”H (3.03 SF/FT)			Quick4 Plus Standard LP = 34”W x 8”H x 48”L (3.53 SF/FT = 15% reduction)					
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms		3 Bedrooms		4 Bedrooms	
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	100	120	160	100	25	100	25	136	34
0.9	133	100	133	178	100	25	116	29	152	38
0.8	150	100	150	200	100	25	128	32	172	43
0.7	171	114	171	229	100	25	148	37	196	49
0.6	200	133	200	267	116	29	172	43	228	57
0.5	240	160	240	320	136	34	204	51	272	68
0.4	300	200	300	400	172	43	256	64	340	85
0.3	400	267	400	533	228	57	340	85	456	114
0.2	600	400	600	800	340	85	512	128	680	170
0.1	1,200	800	1,200	1,600	680	170	1,020	255	1,360	340

Table 5: Quick4 Plus Standard LP Sizing for 36”W x 9”H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36”W x 9”H (2.31 SF/FT)			Quick4 Plus Standard LP = 34”W x 8”H x 48”L (3.08 SF/FT = 25% reduction)					
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms		3 Bedrooms		4 Bedrooms	
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	104	156	208	100	25	120	30	156	39
0.9	133	116	173	231	100	25	132	33	176	44
0.8	150	130	195	260	100	25	148	37	196	49
0.7	171	149	223	297	112	28	168	42	224	56
0.6	200	173	260	347	132	33	196	49	260	65
0.5	240	208	312	416	156	39	236	59	312	78
0.4	300	260	390	520	196	49	296	74	392	98
0.3	400	347	520	693	260	65	392	98	520	130
0.2	600	520	780	1,040	392	98	588	147	780	195
0.1	1,200	1,040	1,560	2,080	780	195	1,172	293	1,560	390

Table 6: Quick4 Plus Standard LP Sizing for 36”W x 6”H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36”W x 6”H (2.00 SF/FT)			Quick4 Plus Standard LP = 34”W x 8”H x 48”L (2.67 SF/FT = 25% reduction)					
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms		3 Bedrooms		4 Bedrooms	
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	120	180	240	100	25	136	34	180	45
0.9	133	133	200	267	100	25	152	38	200	50
0.8	150	150	225	300	116	29	172	43	228	57
0.7	171	171	257	343	132	33	196	49	260	65
0.6	200	200	300	400	152	38	228	57	300	75
0.5	240	240	360	480	180	45	272	68	360	90
0.4	300	300	450	600	228	57	340	85	452	113
0.3	400	400	600	800	300	75	452	113	600	150
0.2	600	600	900	1,200	452	113	676	169	900	225
0.1	1,200	1,200	1,800	2,400	900	225	1,352	338	1,800	450

Notes

1. Per South Carolina law, the minimum required square footage for any drainfield system sized according to these tables is 300 square feet, measured as the area bounded by the trench width and length, for soils in all classifications.
2. To calculate additional bedrooms, multiply the number of bedrooms by the applicable absorption area per bedroom, divide by the chamber equivalency rating shown above, and divide by the chamber length. Example: 5 bedrooms x 200 sf/bedroom / 3.53 sf/ft equivalency rating / 4 ft/Quick4 Standard LP chamber = 70.8 chambers, rounded up to 71 chambers.

Table 7: EZflow 1203H Sizing for 36”W x 14”H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36”W x 14”H (3.00 SF/FT)			EZflow 1203H 36”W x 12”H (4.00 SF/FT = 25% reduction)		
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms	3 Bedrooms	4 Bedrooms
GPD/SF	SF/BR	LF	LF	LF	LF	LF	LF
1.0	120	100	120	160	100	100	120
0.9	133	100	133	178	100	100	133
0.8	150	100	150	200	100	113	150
0.7	171	114	171	229	100	129	171
0.6	200	133	200	267	100	150	200
0.5	240	160	240	320	120	180	240
0.4	300	200	300	400	150	225	300
0.3	400	267	400	533	200	300	400
0.2	600	400	600	800	300	450	600
0.1	1,200	800	1,200	1,600	600	900	1,200

Table 8: EZflow 0904H and 1003H Sizing for 36”W x 9”H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36”W x 9”H (2.31 SF/FT)			EZflow 0904H 36”W x 9”H (3.08 SF/FT = 25% reduction)			EZflow 1003H 30”W x 10”H (2.56 SF/FT = 10% reduction)		
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms	3 Bedrooms	4 Bedrooms
GPD/SF	SF/BR	LF	LF	LF	LF	Units	LF	Units	LF	Units
1.0	120	104	156	208	100	117	156	120	140	187
0.9	133	116	173	231	100	130	173	120	156	208
0.8	150	130	195	260	100	146	195	120	176	234
0.7	171	149	223	297	111	167	223	134	201	267
0.6	200	173	260	347	130	195	260	156	234	312
0.5	240	208	312	416	156	234	312	187	281	374
0.4	300	260	390	520	195	293	390	234	351	468
0.3	400	347	520	693	260	390	520	312	468	624
0.2	600	520	780	1,040	390	585	780	468	702	936
0.1	1,200	1,040	1,560	2,080	780	1,170	1,560	936	1,404	1,872

Table 9: EZflow 0705H Sizing for 36”W x 6”H Gravel

Loading Rate	Absorption Area per Bedroom	Gravel Trench = 36”W x 6”H (2.00 SF/FT)			EZflow 0705H 35”W x 7”H (2.67 SF/FT = 25% reduction)		
		2 Bedrooms	3 Bedrooms	4 Bedrooms	2 Bedrooms	3 Bedrooms	4 Bedrooms
GPD/SF	SF/BR	LF	LF	LF	LF	LF	LF
1.0	120	120	180	240	100	135	180
0.9	133	133	200	267	100	150	200
0.8	150	150	225	300	113	169	225
0.7	171	171	257	343	129	193	257
0.6	200	200	300	400	150	225	300
0.5	240	240	360	480	180	270	360
0.4	300	300	450	600	225	338	450
0.3	400	400	600	800	300	450	600
0.2	600	600	900	1,200	450	675	900
0.1	1,200	1,200	1,800	2,400	900	1,350	1,800

Notes

1. Per South Carolina law, the minimum required square footage for any drainfield system sized according to these tables is 300 square feet, measured as the area bounded by the trench width and length, for soils in all classifications.
2. To calculate additional bedrooms, multiply the number of bedrooms by the applicable absorption area per bedroom and divide by the applicable equivalency rating shown above. Example: 5 bedrooms x 200 sf/bedroom / 4.0 sf/ft EZflow 1203H equivalency rating = 250 feet of EZflow 1203H.
3. EZflow bundles may be cut to achieve a specific trench length.