

# Design and Installation Manual Supplement for Quick4 Plus Chambers in Manitoba



The purpose of this product information sheet is to provide specific design and installation information pertinent for the use of Infiltrator Quick4 Plus chambers in Manitoba. Infiltrator products must be used in conjunction with the standards described in the XXXXXXXXXXXXXXXX XXXXXX and Infiltrator's approval (www.XXXXXX). This document provides a brief description of the chamber and sizing specifications. For more detailed design information, please contact Infiltrator Systems at 1-800-221-4436.

### Infiltrator Quick4 Plus Chambers

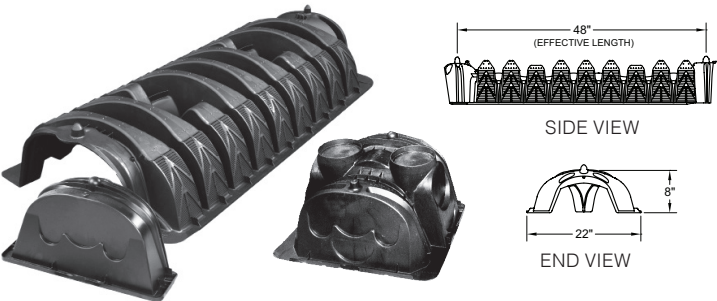
The Quick4 Plus Equalizer 36 Low Profile, Quick4 Plus Standard, Quick4 Plus Standard Low Profile and Quick4 Plus High Capacity chambers are approved for use by Manitoba Conservation. These Quick4 Plus chamber models can be installed in several different

configurations. The Quick4 Plus Equalizer 36 LP chamber can be installed in 24-inch-wide trenches. The Quick4 Plus Standard, Quick4 Plus Standard LP and Quick4 Plus High Capacity chambers can be installed in 36-inch-wide trenches. All Infiltrator chambers can be used in installations of total area fields and pressurized sand treatment mounds. There are a variety of system inletting options to choose from, with and without a distribution box. The Quick4 Plus All-in-One 8 and 12 Endcap models can be installed mid-line in a chamber row, allowing for a center-fed trench or total area field. This configuration requires drilling of a 4-inch-diameter hole in the end of the end cap at ground level to allow effluent to flow to both sides of the chamber row.

### Quick4 Plus Equalizer 36 LP Chamber Nominal Specifications

Chamber Rating	3.5 SF/LF
Size (W x L x H)	22" x 53" x 8" (56 cm x 135 cm x 15 cm)
Storage Capacity	20 gal (76 L)
Invert Elevation	3.3", 9" (8 cm, 23 cm)

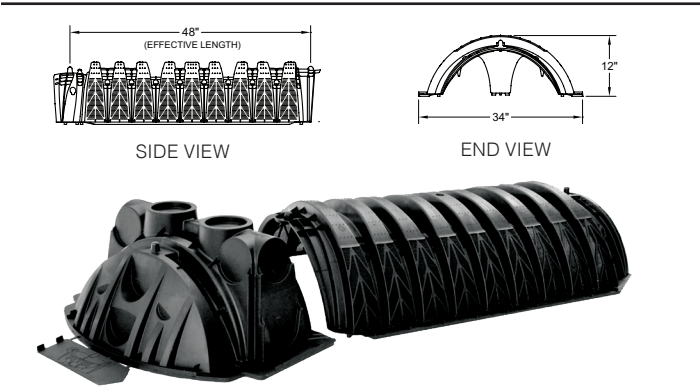
Quick4 Plus Equalizer 36 LP Chamber uses the Quick4 Plus All-in-One 8 or Quick4 Plus 8 endcap.



### Quick4 Plus Standard LP Chamber Nominal Specifications

Chamber Rating	4.3 SF/LF
Size (W x L x H)	34" x 53" x 8" (85 cm x 135 cm x 15 cm)
Storage Capacity	32 gal (121 L)
Invert Elevation	3.3", 9" (8 cm, 23 cm)

Quick4 Plus Standard LP Chamber uses the Quick4 Plus All-in-One 8 or Quick4 Plus 8 endcap.



### Quick4 Plus Standard Chamber Nominal Specifications

Chamber Rating	4.3 SF/LF
Size (W x L x H)	34" x 53" x 12" (85 cm x 135 cm x 31 cm)
Storage Capacity	46 gal (176 L)
Invert Elevation	8" (20 cm)

Quick4 Plus Standard Chamber uses the Quick4 Plus All-in-One 12 endcap.

### Quick4 Plus High Capacity Chamber Nominal Specifications

Chamber Rating	4.8 SF/LF
Size (W x L x H)	34" x 53" x 14" (86 cm x 135 cm x 36 cm)
Storage Capacity	54 gal (204 L)
Invert Elevation	8", 12.7" (20 cm, 32 cm)

Quick4 Plus High Capacity Chamber uses the Quick4 Plus All-in-One 12 endcap

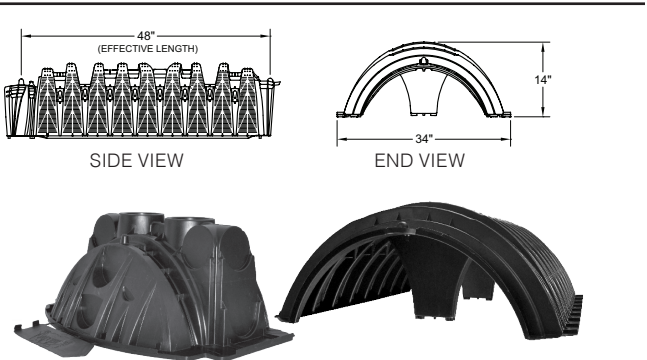


TABLE 1: QUICK4 PLUS EQUALIZER 36 LP CHAMBER SYSTEM SIZING FOR TRENCH FIELDS					Length of Trenches (Feet)				
Soil Type		Perc Rate	App. Rate		2 Bdrm 220 gpd	3 Bdrm 330 gpd	4 Bdrm 440 gpd	5 Bdrm 550 gpd	Each Add. Bdrm
		(min/inch)	(igpd/sq.ft)	(lpd/sq.m)					
(n) Sand 85-100%	Modified subsurface system	1-8	0.60	29.35	105	157	210	262	35
(m) Loamy Sand	Traditional Subsurface Chamber Systems	9-15	0.60	29.35	105	157	210	262	35
		16-20	0.55	26.90	114	171	229	266	38
(l) Sandy Loam		21-25	0.50	24.45	126	189	251	314	42
		26-30	0.45	22.02	140	210	279	349	47
		31-35	0.41	20.10	153	230	307	383	51
		36-40	0.37	18.10	170	255	340	425	57
(i) Loamy Sand		41-45	0.34	16.63	185	277	370	462	62
		46-50	0.31	15.16	203	304	406	507	68
(j) Silty Loam		51-55	0.28	13.70	224	337	449	561	75
(h) Sandy Clay Loam		56-60	0.26	12.72	242	363	484	604	81
(k) Silt		61-65	0.24	11.75	262	393	524	655	87
(g) Clay Loam		66-70	0.22	10.76	286	429	571	714	95
		71-75	0.20	9.78	314	471	629	786	105
		76-80	0.18	8.80	349	524	698	873	116
(f) Silty Clay Loam									
(e) Sandy Clay 35<40%									
(d) Sandy Clay 40-60%	Modified System See soil texture class matrix	81-120	0.17	8.31	370	555	739	924	123
(c) Silty Clay 40-60% clay									
(b) Clay 40-60% clay									
(a) Heavy Clay >60-100% clay	Modified Above Ground System See soil texture class matrix	>120							

TABLE 2: QUICK4 PLUS STD AND QUICK4 PLUS STD LP CHAMBER SYSTEM SIZING FOR TRENCH FIELDS						Length of Trenches (Feet)				
Soil Type		Perc Rate	App. Rate		2 Bdrm 220 gpd	3 Bdrm 330 gpd	4 Bdrm 440 gpd	5 Bdrm 550 gpd	Each Add. Bdrm	
		(min/inch)	(igpd/sq.ft)	(lpd/sq.m)						
(n) Sand 85-100%	Modified subsurface system See soil texture class matrix	1-8	0.60	29.35	85	128	171	213	28	
(m) Loamy Sand	Traditional Subsurface Chamber Systems	9-15	0.60	29.35	85	128	171	213	28	
		16-20	0.55	26.90	93	140	186	233	31	
(l) Sandy Loam		21-25	0.50	24.45	102	153	205	256	34	
		26-30	0.45	22.02	114	171	227	284	38	
		31-35	0.41	20.10	125	187	250	312	42	
		36-40	0.37	18.10	138	207	277	346	46	
(i) Loamy Sand		41-45	0.34	16.63	150	226	301	376	50	
		46-50	0.31	15.16	165	248	330	413	55	
(j) Silty Loam		51-55	0.28	13.70	183	274	365	457	61	
(h) Sandy Clay Loam		56-60	0.26	12.72	197	295	394	492	66	
(k) Silt		61-65	0.24	11.75	213	320	426	533	71	
		66-70	0.22	10.76	233	349	465	581	78	
		71-75	0.20	9.78	256	384	512	640	85	
		76-80	0.18	8.80	284	426	568	711	95	
(f) Silty Clay Loam		Modified System See soil texture class matrix	81-120	0.17	8.31	301	451	602	752	100
(e) Sandy Clay 35<40%										
(d) Sandy Clay 40-60%										
(c) Silty Clay 40-60% clay	Modified Above Ground System. See soil texture class matrix. No subsurface systems.	>120								
(b) Clay 40-60% clay										
(a) Heavy Clay >60-100% clay										

TABLE 3: QUICK4 PLUS HIGH CAPACITY CHAMBER SYSTEM SIZING FOR TRENCH FIELDS					Length of Trenches (Feet)					
Soil Type		Perc Rate	App. Rate		2 Bdrm 220 gpd	3 Bdrm 330 gpd	4 Bdrm 440 gpd	5 Bdrm 550 gpd	Each Add. Bdrm	
		(min/inch)	(igpd/sq.ft)	(lpd/sq.m)						
(n) Sand 85-100%	Modified subsurface system. See soil texture class matrix	1-8	0.60	29.35	76	115	153	191	51	
(m) Loamy Sand	Traditional Subsurface Chamber Systems	9-15	0.60	29.35	76	115	153	191	51	
		16-20	0.55	26.90	83	125	167	208	56	
(l) Sandy Loam		21-25	0.50	24.45	92	138	183	229	61	
		26-30	0.45	22.02	102	153	204	255	68	
		31-35	0.41	20.10	112	168	224	279	75	
		36-40	0.37	18.10	124	186	248	310	83	
(i) Loamy Sand		41-45	0.34	16.63	135	202	270	337	90	
		46-50	0.31	15.16	148	222	296	370	99	
(j) Silty Loam		51-55	0.28	13.70	164	246	327	409	109	
(h) Sandy Clay Loam		56-60	0.26	12.72	176	264	353	441	118	
(k) Silt		61-65	0.24	11.75	191	286	382	477	127	
		66-70	0.22	10.76	208	313	417	521	139	
		71-75	0.20	9.78	229	344	458	573	153	
		76-80	0.18	8.80	255	382	509	637	170	
(f) Silty Clay Loam		Modified System See soil texture class. Matrix.	81-120	0.17	8.31	270	404	539	674	180
(e) Sandy Clay 35<40%										
(d) Sandy Clay 40-60%										
(c) Silty Clay 40-60% clay		Modified Above Ground System. See soil texture class matrix. No subsurface systems.	>120							
(b) Clay 40-60% clay										
(a) Heavy Clay >60-100% clay										

TABLE 4: SYSTEM SIZING FOR TOTAL AREA FIELDS				Chamber Total Area System (Square Feet)				
Soil Type		Perc Rate (min/inch)	App.Rate (igpd/sf)	2 220	3 330	4 440	5 550	Each Add. BR
Coarse to Medium Sand	Modified Surface/	1-5	0.60	550	825	1100	1375	275
Fine Sand Sandy Loam		6-10	0.60	550	825	1100	1375	275
		11-15	0.60	550	825	1100	1375	275
		16-20	0.55	600	900	1200	1500	300
		21-25	0.50	660	990	1320	1650	330
		26-30	0.45	733	1100	1467	1833	367
		31-35	0.41	805	1207	1610	2012	402
Silty Loam		36-40	0.37	892	1338	1784	2230	446
		41-45	0.34	971	1456	1941	2426	485
		46-50	0.31	1065	1597	2129	2661	532
		51-55	0.28	1179	1768	2357	2946	589
		56-60	0.26	1269	1904	2538	3173	635

### Total Area Field Information:

#### Chamber Ratings [sf/chamber]:

Quick4 Plus Equalizer 36 LP Rating = 14 sf/chamber

Quick4 Plus Standard Rating = 17.2 sf/chamber

Quick4 Plus Standard LP Rating = 17.2 sf/chamber

Quick4 Plus High Capacity Rating = 19.2 sf/chamber

#### Legend:

min/inch = minutes per inch

igpd/sf = imperial gallons per day per square foot

igpd = imperial gallons per day

BR = bedroom

#### Sizing Equation:

Area of Field = Daily Sewage Flow X Safety Factor  
Application Rate

Area of Field (sq.ft.): Total required disposal field surface area

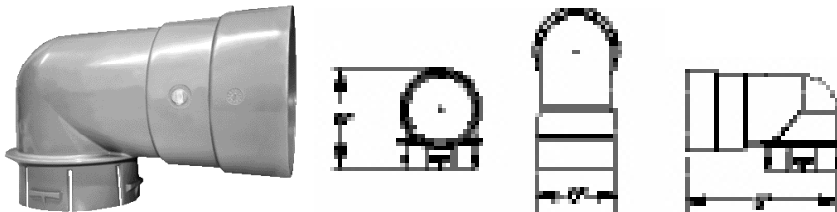
Daily Effluent Flow (igpd): Volume produced on a daily basis, 110 igpd/bedroom

Application Rate (igpd/sq. ft.): Application rate given, based upon US EPA

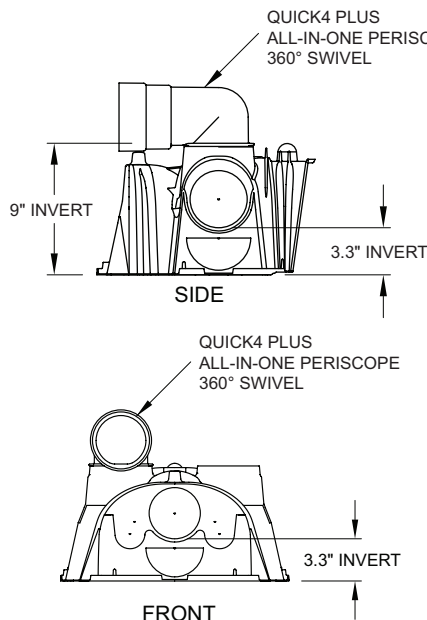
Safety Factor: Factor of 2.0 for graded stone and pipe systems and 1.5 for chamber/aggregate-free systems

## Quick4 Plus All-in-One Periscope

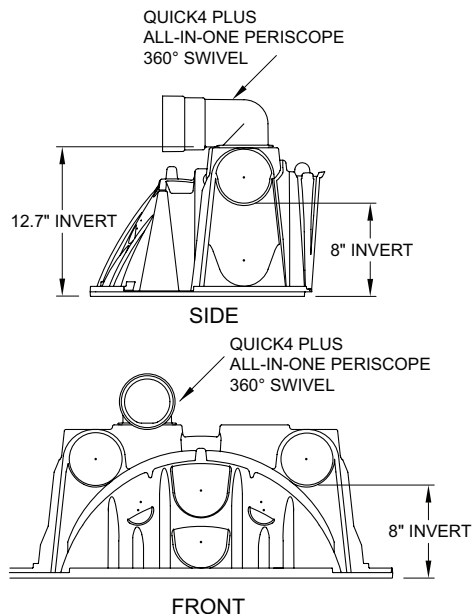
The Quick4 Plus All-in-One Periscope is inserted into the top of the Quick4 Plus All-in-One Endcap or any Quick4 chamber, allowing for raised invert installations with 180° directional inletting. An ideal solution for serial applications.



## Quick4 Plus All-in-One 8 Endcap System



## Quick4 Plus All-in-One 12 Endcap System



## Infiltrator Systems Inc., Standard Limited Warranty for Septic Products

(a) The structural integrity of each chamber and end cap manufactured by Infiltrator (collectively referred to as "Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's installation instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date upon which a septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required for the septic system by applicable law, the one (1) year warranty period will begin upon the date that installation of the septic system commences. In order to exercise its warranty rights, Holder must notify Infiltrator in writing at its corporate headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for those Units determined by Infiltrator to be defective and covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse,

abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting, improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty.

Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change this Limited Warranty in any manner whatsoever, or to extend this Limited Warranty. No warranty applies to any party other than the original Holder.

The above represents the standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's corporate headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.

Infiltrator Systems recommends the use of septic tank filters and laundry filters with all onsite septic systems.



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U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,778; 5,839,844 Canadian Patents: 1,329,959; 2,004,564 Other patents pending. Infiltrator, Equalizer, Quick4, and SideWinder are registered trademarks of Infiltrator Systems Inc. Infiltrator is a registered trademark in France. Infiltrator Systems Inc. is a registered trademark in Mexico. Contour, MicroLeaching, PolyTuff, ChamberSpacer, MultiPort, PosiLock, QuickCut, QuickPlay, SnapLock and StraightLock are trademarks of Infiltrator Systems Inc. PolyLok is a trademark of PolyLok, Inc. TUF-TITE is a registered trademark of TUF-TITE, INC. Ultra-Rib is a trademark of IPEX Inc.

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