Infiltrator IM-Series Potable Water Tank General Installation Instructions

FEBRUARY 2014

INFILTRATOR® tanks

BEFORE YOU BEGIN

Infiltrator Water Technologies'tanks must be installed according to applicable local, state and/or federal regulations, which supersede the manufacturer's installation instructions. If unsure of the installation requirements for a specific site, contact the permitting authority. The IM-Series referred to in this document includes the IM-550C, IM-1280C and IM-1760C tanks. If tank is to be used as a septic tank, the septic tank installation instructions must be followed and septic tank access port lids are required. Septic tank installation instructions are available online at www.infiltratorwater.com.

WARNING: IMPLOSIONS MAY CAUSE SERIOUS INJURY
Follow Infiltrator Water Technologies' vacuum test instructions

MATERIALS AND EQUIPMENT NEEDED

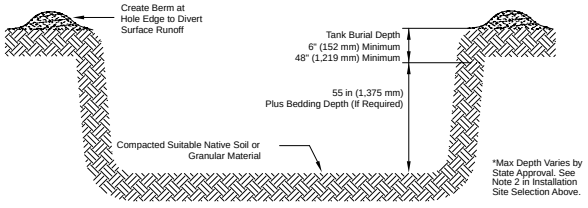
- ☐ Infiltrator tank
- ☐ Access port lid(s)
- ☐ 10 screws per lid
- ☐ Tape measure
- ☐ Pipe, risers, etc.
- ☐ Socket wrench
- ☐ Excavator
- ☐ Shovel
- ☐ Level
- ☐ Appropriately sized hole saw
- ☐ Utility knife
- ☐ PVC pipe glue with primer

INSTALLATION SITE SELECTION

1. Do not install the tank in vehicular traffic areas. The tank is designed for non-traffic applications.
2. The allowable soil cover depth is 6 to 48 inches (150 to 1,200 mm).
3. The tank shall not be installed where the subsurface water level outside the tank exceeds the height of the outlet pipe saddle. Follow Table 2 guidelines.

EXCAVATING AND PREPARING THE SITE

1. Unless buoyancy control measures are required, the excavation width and length should be 18 to 36 inches (450 to 900 mm) larger than the tank on each side or sized as necessary to ensure proper backfill compaction, as outlined in Steps 5-10 of "Backfilling the Tank" in this document. See Infiltrator IM- and TW-Series Tank Buoyancy Control Guidance document, available online at www.infiltratorwater.com, for specific excavation requirements when installing buoyancy control measures.
2. Excavation depth shall account for the height of tank (55 inches (1,375 mm)). Also account for 4 inches (100 mm) of bedding (if required) and cover depth (permissible cover depth is 0.5 to 4 feet (150 to 1,200 mm) of soil).
   Note: If the water level outside the tank exceeds the height of the outlet pipe saddle, tank structural integrity may be compromised. Follow Table 2 guidelines.
3. Inspect bottom of excavation to verify suitability of native soil for tank installation. Soils with large, protruding, or sharp stones or other similar objects that may damage the tank are not suitable.
4. The tank may be installed either in suitable native soil (see Backfilling the Tank section) or a minimum 4-inch (100-mm) layer of well-graded granular soil having particles less than 3 inches (75 mm) in diameter, or maximum 0.5-inch (13-mm) diameter crushed stone.
5. Create a uniform, compacted, level surface to ensure that the bottom of the tank is evenly supported. Verify that the installation surface is flat.



INSTALLING THE TANK

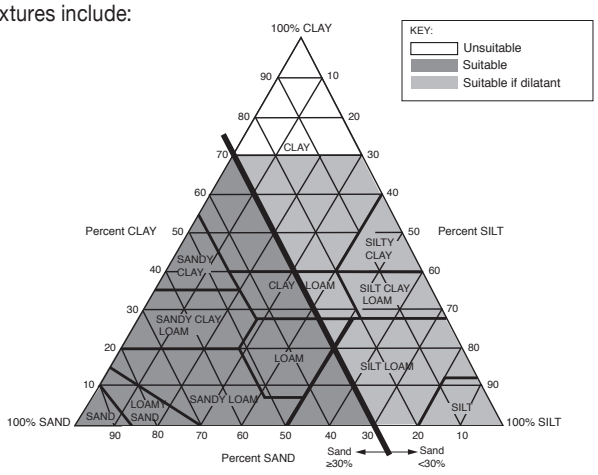
1. Inspect the tank for damage before installation.
2. The tank inlet and/or outlet penetrations are not factory drilled. Drill necessary holes using an appropriately sized hole saw on the drill points provided at each of the inlet and outlet ports. The inlet and outlet may be drilled on either the sides or ends of the tank, as required. Inlets and outlets may also be made through the tank at locations other than drill parts. Contact Infiltrator for assistance.
3. Install rubber gaskets at the inlet and/or outlet as applicable.
4. Using all four of the tank's integral lifting lugs, lower tank into excavation.
5. Slide the inlet and/or outlet pipes through the gaskets. An NSF 61 certified lubricant may be used to assist in sliding the pipe into place.
6. Install lids and risers as necessary. Rotate lid over access opening until it indexes to tank and drops into position.

BACKFILLING THE TANK

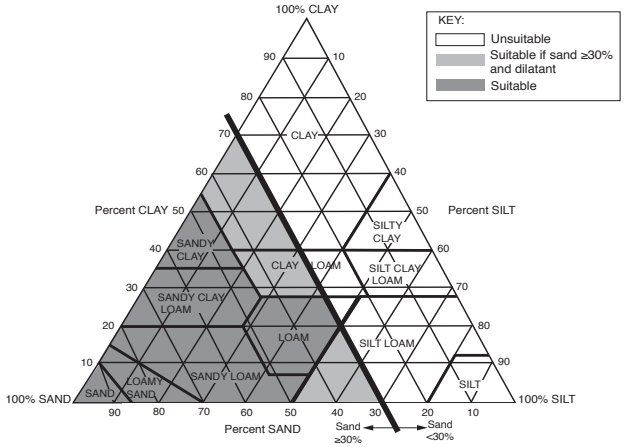
Note: Infiltrator tanks do not require filling with water prior to backfill placement. Water filling and backfilling to the tank mid-height is required if the tank is left in either an open or backfilled excavation that may fill with water from rain or other sources.

1. Backfill with suitable native soil (max. 3-inch (75-mm) stone diameter). If native soil is unsuitable, replace unsuitable fraction with suitable soil. If suitable soil is not locally available, contact Infiltrator for assistance.
2. Suitable soil shall include soil textural classes defined in the United States Department of Agriculture soil triangle. Suitable soil textural classes are based on the tank installation depth, as measured from finished grade to the top of tank.

a) For a tank soil cover depth of 0.5 to 2.0 feet (150 to 600 mm), suitable soil textures include:



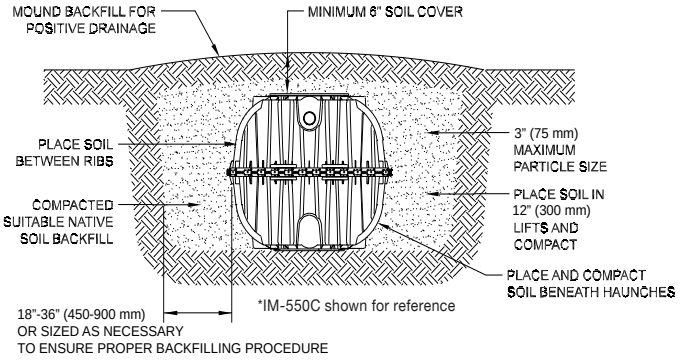
b) For a tank soil cover depth that is greater than 2.0 feet and up to 4.0 feet (600 to 1,200 mm), suitable soil textures include:



WARNING: Infiltrator is not responsible for water quality produced by drinking water systems containing the IM-Series Potable Water Tank. The tank purchaser is solely responsible for ensuring that provisions are in place to meet applicable local, state, and federal water quality standards for a drinking water system that includes an IM-Series Potable Water Tank.

Failure to comply with these installation instructions will invalidate the warranty. Contact Infiltrator Water Technologies'Technical Services Department for assistance at 1-800-221-4436.

3. Backfill should not have stones greater than 3 inches (75 mm) in diameter or excessive clods that do not break apart during placement and compaction. Backfill must be capable of occupying the spaces between the tank ribs and beneath the haunches.
   Note: Rounded screened aggregate (e.g., pea gravel) is not a suitable backfill.
4. Standard field soil classification methods shall be used to determine the soil textural class.
   Note: Under most circumstances, the determination of soil dilatancy will not be required. Dilatancy shall be determined in the field using a test that does not require specialized equipment, per ASTM D2488, Section 14.3. Complete instructions can be found at www.infiltratorwater.com
5. Place and compact soil by walking-in beneath the haunches of the tank.
6. Place backfill around the four sidewalls in an alternating manner, so that the backfill height along the four sidewalls is maintained within a 12-inch (300-mm) tolerance.
7. Do not backfill top of tank before sidewalls are completely backfilled.
8. Continue to place backfill along the sidewalls in 12-inch (300-mm) lifts. Place backfill between the ribs on the sidewalls such that the space between the ribs is completely filled with soil.
9. Compact backfill material either by walking-in, hand tamping or mechanical compaction (includes backhoe bucket). If mechanical compaction is used, such as a walk-behind tamper or backhoe bucket, a single pass is recommended. Compact each lift prior to placement of next lift. Compact backfill from tank walls to excavation sidewalls.
10. Complete backfilling and grade the area.
11. A minimum 6-inch (150-mm) depth of suitable soil must be placed over the top of the tank. The balance of backfill placed to finish grade above the tank may be either suitable or unsuitable soil.
12. Establish a strong stand of erosion-resistant vegetation.
    Note: Grade to prevent the backfilled excavation from filling with surface runoff. If the water level in the backfilled excavation exceeds the height of the outlet pipe saddle, tank structural integrity may be compromised.



SHORT AND LONG-TERM GROUNDWATER CONTROL

It may be necessary to implement groundwater control measures during tank installation. Maintain dry conditions by expanding the excavation to create a short-term groundwater collection sump for temporary placement of a dewatering pump if needed. Long-term groundwater control measures such as underdrains and interceptor trenches may be sensible if the site is amenable to construction of a control system and such systems are not prohibited by regulation or law, and the tank location is not subject to flooding. Properly installed underdrains and groundwater interceptor trenches may prevent the need for tank buoyancy control measures.

INSTALLING UNDER SHALLOW GROUNDWATER CONDITIONS

Buoyancy control measures may be required if the Infiltrator tank is to be installed with less than 12 inches (300 mm) of soil backfill cover, and where the water level outside the tank has the potential to rise 30 inches (750 mm) or more above the elevation of the tank bottom. Otherwise, no control measures are required (see Table 1). The need for buoyancy control measures must be determined based on backfill cover depth and height of water outside of tank above the tank bottom according to Table 1. Refer to Infiltrator IM- and TW-Series Tank Buoyancy Control Guidance document for more information.

Table 1: Tank models[1] and conditions requiring buoyancy control[2]

Water height above tank bottom	Soil cover depth above tank[3]	
	6 in (150 mm) to 12 in (300 mm)	Above 12 in (300 mm)
Above outlet pipe saddle	Do not install	Do not install
36 in (900 mm) to outlet pipe saddle[4]	All models	None
30 in (750 mm) to 36 in (900 mm)	IM-1760C	None
Less than 30 in (750 mm)	None	None

1. IM-550C, IM-1280C and IM-1760C.
2. See Infiltrator IM- and TW- Series Tank Buoyancy Control Guidance for detailed information on the use of controls.
3. No controls are required for soil cover depths exceeding 12 in (300 mm).
4. The tank shall not be installed where the water level outside the tank exceeds the height of the outlet pipe saddle. Follow Table 2 guidelines.

INSTALLING PUMPS AND RELATED EQUIPMENT

Pumps may be supported on a stable, level 16x16-inch (400x400-mm) platform positioned on the bottom of the tank. One 16x16-inch block or two 8x16-inch (200 -mm x 400-mm) side-by-side blocks may be used. Limit block height to account for pump height and liquid levels during pump cycles. Block(s) should be placed below an access opening and level upon the tank bottom. For two blocks, orient them perpendicular to ribs on the tank bottom, if present, for stability.

Installation of products such as electrical conduit and wiring, pumps, water level control equipment, valves, siphon equipment, etc. shall be in accordance with the product manufacturer's instructions and compliant with applicable state or local rules and regulations. Appurtenances shall be fastened to the tank riser system and not the tank body or access opening rim. Where possible, appurtenances shall be installed to facilitate maintenance and repair access via the tank access openings.
Note: Prefabricated pump vaults may be installed.

Note: Infiltrator Water Technologies is not responsible for components added to IM-Series Potable Water Tanks. The tank purchaser is solely responsible for ensuring that such added components are suitable for use in a potable water system.

GENERAL SPECIFICATIONS

- Failure to comply with installation instructions will void warranty.
- Prior to ground disturbance, check for subsurface obstructions and utilities in conformance with applicable requirements.
- Operating water temperature shall be less than 100° F (40° C).
- In cold conditions, handle and backfill tank with care to prevent impact damage.
- Tanks are not fire resistant. Store away from ignition sources.
- Removal of structural bulkheads is prohibited; removal of locking clips on the IM-Series tank mid-seam connection is also prohibited.
- Only suitable for potable applications if the tank bears the NSF/ANSI 61 certification mark. Otherwise, tank is recommended for use in septic, rainwater/ stormwater storage, holding, and pump applications, or other non-potable uses.
- Infiltrator tanks are designed for installation underground.
- Contact Infiltrator for above-ground use requirements.

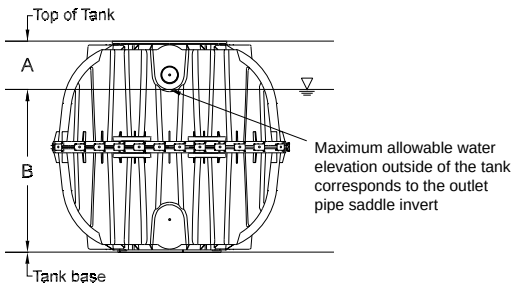


Table 2: Maximum Allowable Subsurface Water Elevation

Tank Model	Vertical Distance to Maximum Allowable Water Elevation Outside of Tank	
	A From Top of Tank	B From Tank Base
IM-Series[1]	13" (330 mm)	43" (1,075 mm)

1. IM-Series Potable tanks include the IM-550C, IM-1280C and IM-1760C.

Table 3: Tank Nominal Volume Chart

Height[1]		Total liquid volume in tank at indicated height					
		IM-550C		IM-1280C		IM-1760C	
in	cm	U.S. Gal	Liters	U.S. Gal	Liters	U.S. Gal	Liters
1	3	3	11	3	11	17	64
2	5	8	30	13	49	34	128
3	8	14	53	28	106	51	192
4	10	21	80	46	174	68	256
5	13	29	109	65	246	94	357
6	15	37	141	86	326	122	463
7	18	46	173	107	405	152	573
8	20	55	207	129	488	180	681
9	23	64	243	152	575	212	802
10	25	74	279	176	666	245	928
11	28	84	317	200	757	280	1,061
12	30	94	356	225	852	312	1,182
13	33	105	396	251	950	351	1,328
14	36	116	437	277	1,049	387	1,463
15	38	127	480	303	1,147	422	1,597
16	40	138	523	330	1,249	464	1,756
17	43	150	566	357	1,351	500	1,892
18	46	161	611	384	1,454	537	2,034
19	48	173	656	411	1,556	575	2,177
20	50	186	702	438	1,658	614	2,322
21	53	198	749	465	1,760	652	2,468
22	56	210	796	493	1,866	690	2,612
23	58	223	843	521	1,972	729	2,758
24	61	235	891	549	2,078	770	2,914
25	64	248	940	577	2,184	808	3,058
26	66	261	988	605	2,290	847	3,208
27	69	274	1,038	633	2,396	887	3,356
28	71	287	1,088	662	2,506	928	3,513
29	74	300	1,137	691	2,616	968	3,665
30	76	313	1,185	719	2,722	1,007	3,814
31	79	326	1,233	747	2,828	1,048	3,966
32	81	338	1,281	775	2,934	1,087	4,113
33	84	351	1,328	802	3,036	1,126	4,262
34	86	363	1,375	830	3,142	1,165	4,410
35	89	375	1,421	857	3,244	1,204	4,557
36	91	387	1,466	884	3,346	1,242	4,701
37	94	399	1,511	911	3,449	1,280	4,846
38	97	411	1,555	938	3,551	1,318	4,988
39	99	422	1,598	965	3,653	1,355	5,131
40	102	433	1,640	992	3,755	1,393	5,272
41	104	444	1,681	1,018	3,854	1,430	5,412
42	107	455	1,722	1,044	3,952	1,466	5,550
43	109	465	1,761	1,069	4,047	1,502	5,685
44	112	475	1,799	1,094	4,141	1,537	5,817
45	114	485	1,836	1,118	4,232	1,572	5,950
46	117	494	1,871	1,142	4,323	1,604	6,070
47	119	503	1,905	1,165	4,410	1,638	6,201
48	122	512	1,938	1,187	4,493	1,667	6,310
49	124	520	1,970	1,208	4,573	1,697	6,422
50	127	528	1,999	1,228	4,648	1,724	6,527
51	130	535	2,027	1,247	4,720	1,749	6,621
52	132	542	2,050	1,265	4,789	1,766	6,684
53	135	547	2,071	1,278	4,838	1,777	6,726
54	137	551[2]	2,087	1,287	4,872	1,785[2]	6,758

1. Height measured from lowermost inside surface at bottom of corrugation in tank.
2. The total capacity of the IM-550C tank is 552 gallons; the total capacity of the IM-1760C tank is 1,787 gallons.

INFILTRATOR WATER TECHNOLOGIES, LLC. ("INFILTRATOR") INFILTRATOR® POTABLE WATER TANK LIMITED WARRANTY
FIVE (5) YEAR MATERIALS AND WORKMANSHIP LIMITED WARRANTY

(a) This limited warranty is extended to the end user of an Infiltrator Potable Water Tank. A Potable Water Tank manufactured by Infiltrator, when installed and operated in accordance with Infiltrator's installation instructions and local regulation by a licensed installer, is warranted to you: (i) against defective materials and workmanship for five (5) years after installation. Infiltrator will, at its option, (i) repair the defective product or (ii) replace the defective materials. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Potable Water Tank.

(b) In order to exercise its warranty rights, you must notify Infiltrator in writing at its corporate headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect.

(c) YOUR EXCLUSIVE REMEDY WITH RESPECT TO ANY AND ALL LOSSES OR DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER SHALL BE SPECIFIED IN SUBPARAGRAPH (a) ABOVE. INFILTRATOR SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND, HOWEVER OCCASIONED, WHETHER BY NEGLIGENCE OR OTHERWISE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

(d) THIS LIMITED WARRANTY IS THE EXCLUSIVE WARRANTY GIVEN BY INFILTRATOR AND SUPERSEDES ANY PRIOR, CONTRARY, ADDITIONAL, OR SUBSEQUENT REPRESENTATIONS, WHETHER ORAL OR WRITTEN. INFILTRATOR DISCLAIMS AND EXCLUDES TO THE GREATEST EXTENT ALLOWED BY LAW ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FINESSE FOR A PARTICULAR PURPOSE AND ANY IMPLIED WARRANTIES OTHERWISE ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. NO PERSON (INCLUDING ANY EMPLOYEE, AGENT, DEALER, OR REPRESENTATIVE) IS AUTHORIZED TO MAKE ANY REPRESENTATION OR WARRANTY CONCERNING THIS PRODUCT, EXCEPT TO REFER YOU TO THIS LIMITED WARRANTY. EXCEPT AS EXPRESSLY SET FORTH HEREIN, THIS WARRANTY IS NOT A WARRANTY OF FUTURE PERFORMANCE, BUT ONLY A WARRANTY TO REPAIR OR REPLACE.

(e) YOU MAY ASSIGN THIS LIMITED WARRANTY TO A SUBSEQUENT PURCHASER OF YOUR HOME.

(f) NO REPRESENTATIVE OF INFILTRATOR HAS THE AUTHORITY TO CHANGE THIS LIMITED WARRANTY IN ANY MANNER WHATSOEVER, OR TO EXTEND THIS LIMITED WARRANTY.

CONDITIONS AND EXCLUSIONS

There are certain conditions or applications over which Infiltrator has no control. Defects or problems as a result of such conditions or applications are not the responsibility of Infiltrator and are NOT covered under this warranty. They include failure to install the Potable Water Tank in accordance with instructions or applicable regulatory requirements or guidance, altering the Potable Water Tank contrary to the installation instructions and disposing of chemicals or other materials contrary to normal Potable Water Tank usage.

The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of a Potable Water Tank 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 a Potable Water Tank.

IM-SERIES POTABLE WATER TANK LIMITED LIABILITY

The IM-Series Potable Water Tank is NSF/ANSI 61 certified. NSF/ANSI 61 establishes minimum health effects requirements for materials, components, products or systems that contact drinking water, drinking water treatment chemical, or both. This includes minimum health effects requirements for the chemical contaminants and impurities that are indirectly imparted to drinking water from products, components, and materials used in drinking water systems. NSF/ANSI 61 does not establish performance, taste and odor, or microbial growth support requirements for drinking water system products, components, or materials. The tank purchaser is solely responsible for ensuring that provisions are in place to meet applicable local, state, and federal water quality standards for a drinking water system that includes an IM-Series Potable Water Tank. Potable water systems that incorporate the IM-Series Potable Water Tank must be designed and installed by properly licensed professionals and regular water quality testing should be conducted for the system in accordance with applicable requirements. In addition, care should be taken to have the IM-Series Potable Water Tank thoroughly cleaned and disinfected prior to use and as necessary to maintain acceptable water quality during its service life. Infiltrator Water Technologies, LLC is not responsible for water quality produced by drinking water systems containing the IM-Series Potable Water Tank.

INFILTRATOR®
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