

Installation Manual

PROCEDURE

Retroceptors are typically located under or in close proximity to the kitchen sink. For on-floor installations, go to section A. For in-ground installations, go to section B. For partial in-ground installations, go to section C. For non-standard installations, such as suspension from the ceiling, Retroceptors should only be suspended if they are supported by a rigid flat surface load-bearing platform designed and certified by a local professional engineer to support the entire weight of the retroceptor when full of water. Contact Zurn Green Turtle if you have any questions regarding installation.

NOTE: Proper installation is critical in ensuring the effective operation of the Retroceptor. Installation recommendations may be subject to local jurisdiction code requirements and approvals where applicable. Installation should be performed by licensed professionals.

A) ON-FLOOR INSTALLATION

1. Ensure that the installation area is a rigid and flat surface and free from any debris.
2. Ensure that the installation area provides clear access to the cover.
3. The installation area should have a minimum free space of 12 inches above the top of the cover for easy access. Failure to do this may interfere with proper maintenance.
4. Place the unit on the installation area. Allow room for piping connections.
5. Connect Retroceptor inlet and outlet stubs to piping on site. The inlet and outlet are straight polymer pipes.

Model	Outer Diameter
RC 35	3.5 INCH
RC 50	4.5 INCH

Zurn Green Turtle recommends the use of only flexible rubber (Fernco) couplings suitable for sewer and drainage applications unless forbidden by local code. Code approved materials should always be used to make the connections. Do not use shielded couplings. Do not apply any glue to the Retroceptor piping.

6. Ensure that the connections are water tight.
7. Provide vents as per local plumbing code. Zurn Green Turtle recommends that venting should be provided both upstream and downstream of the Retroceptor. Venting will promote gravity flow, prevent siphoning, and reduce odours.
8. Provide cleanouts as required. Zurn Green Turtle recommends that a cleanout tee be installed directly upstream of the Retroceptor for access to the flow control orifice at the inlet.
9. Fill the Retroceptor with clean water and ensure that all the fasteners are properly secured before starting operation.

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B) IN-GROUND INSTALLATION

Use this procedure together with the applicable installation drawing.

- 1. Ensure that the installation is no deeper than 12 inches from top of the cover to grade. Installations deeper than 12 inches will make it difficult to remove the cover.
 - a. In the case of installations deeper than 12 inches, an in-ground vault should be constructed on-site by local contractor.
- 2. Excavation for the installation of the Retroceptor must conform to OSHA and/or local excavation codes and standards. Top soil removed during excavation should not be used as backfill material.
- 3. Excavation should include an allowance for shoring and bracing where required.
- 4. A 6 inch high base layer of pea gravel (or approved equivalent compacted backfill compacted to 98% S.P.D.) must be installed and leveled at the bottom of the excavation.
- 5. Lower the Retroceptor onto the pea gravel. Adjust the position of the Retroceptor to ensure that the inlet and outlet pipes are in-line with the piping on site.
- 6. Backfill the area surrounding the Retroceptor using pea gravel up to the inlet invert.
- 7. Connect inlet and outlet to piping on site. The inlet and outlet are straight polymer pipes.

Model	Outer Diameter
RC 35	3.5 INCH
RC 50	4.5 INCH

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- 8. Ensure that the connections are water tight.
- 9. Provide vents as per local plumbing code. Zurn Green Turtle recommends that venting should be provided both upstream and downstream of the Retroceptor. Venting will promote gravity flow, prevent siphoning, and reduce odours.
- 10. Provide cleanouts as required. Zurn Green Turtle recommends that a cleanout tee be installed directly upstream of the Retroceptor for access to the flow control orifice at the inlet.
- 11. Pour concrete from the top of the pea gravel to the floor level. Leave a gap between the concrete and the Retroceptor. Ensure that the concrete does not come into contact with any part of the Retroceptor.
- 12. Install a skid resistant access hatch at grade. Ensure that the access hatch is larger than the size of the Retroceptor cover dimensions for ease of maintenance.

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- 13. The access hatch must be secured in concrete. Ensure the concrete being used is designed to support the weight of the access hatch and expected pedestrian and equipment traffic load.
- 14. Fill the Retroceptor with clean water and ensure that all the fasteners are properly secured before starting operation.

C) PARTIAL IN-GROUND INSTALLATION

Use this procedure together with the applicable installation drawing.

- 1. Excavate the installation area to the required depth. Ensure that the inlet and outlet of the Retroceptor are at the same elevation as the piping on site.
- 2. Ensure that installation surface is rigid, flat, free from any debris, and able to support the weight of the Retroceptor filled with water.
- 3. Build a 4 inch high lip all around the excavated area to prevent any water on the kitchen floor from draining into the installation area.
- 4. Ensure that the installation area provides clear access to the cover.
- 5. The installation area should have a minimum free space of 12 inches above the top of the cover for easy access. Failure to do this may cause maintenance issues.
- 6. Place the unit on the installation area. Allow room for piping connections.
- 7. Connect inlet and outlet to piping on site. The inlet and outlet are straight polymer pipes.

Model	Outer Diameter
RC 35	3.5 INCH
RC 50	4.5 INCH

Zurn Green Turtle recommends the use of only flexible rubber (Fernco) couplings suitable for sewer and drainage applications unless forbidden by local code. Code approved materials should always be used to make the connections. Do not use shielded couplings. Do not apply any glue to the Retroceptor piping.

- 8. Ensure that the connections are water tight.
- 9. Provide vents as per local plumbing code. Zurn Green Turtle recommends that venting should be provided both upstream and downstream of the Retroceptor. Venting will promote gravity flow, prevent siphoning, and reduce odours.
- 10. Provide cleanouts as required. Zurn Green Turtle recommends that a cleanout tee be installed directly upstream of the Retroceptor for access to the flow control orifice at the inlet.
- 11. Fill the Retroceptor with clean water and ensure that all the fasteners are properly secured before starting operation.

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GRANULAR BACKFILL SPECIFICATION

PEA GRAVEL

Pea Gravel is a naturally rounded aggregate with a particle size not less than 3mm (1/8") and not greater than 18mm (3/4"). Gravel must be clean and free flowing, free from large rocks, dirt, sand, roots, organic materials or debris. Upon screening, analysis of the backfill material must have no more than 3% of its weight passing through a #8 sieve (2.38 mm square screen opening). Dry density must be a minimum of 96.3 lbs/ft³.

CRUSHED STONE (APPROVED EQUIVALENT TO PEA GRAVEL) – MUST BE COMPACTED

Crushed stone or gravel is not less than 3 mm (1/8") and not greater than 12mm (1/2"). Aggregate must be clean and free flowing, free from large rocks, dirt, sand, roots, organic materials or debris. Materials should be washed or screened to remove fine particles. Upon screening, analysis of the backfill material shall have no more than 3% of its weight passing through #8 sieve (2.38 mm square screen opening). Dry density must be a minimum of 95 lbs/ft².

COARSE GRAVEL – MUST BE COMPACTED

Coarse sand or gravel is containing rocks no larger than 36 mm (1 1/2") in dimension. Backfill must be clean and free flowing, free from large rocks, dirt, sand, roots, organic materials, or debris. Upon screening, analysis of the backfill material must have no more than 5% of its weight passing through a #200 sieve (0.074 mm square screen opening).

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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 **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov