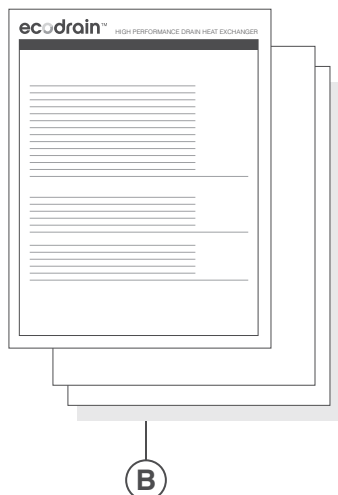


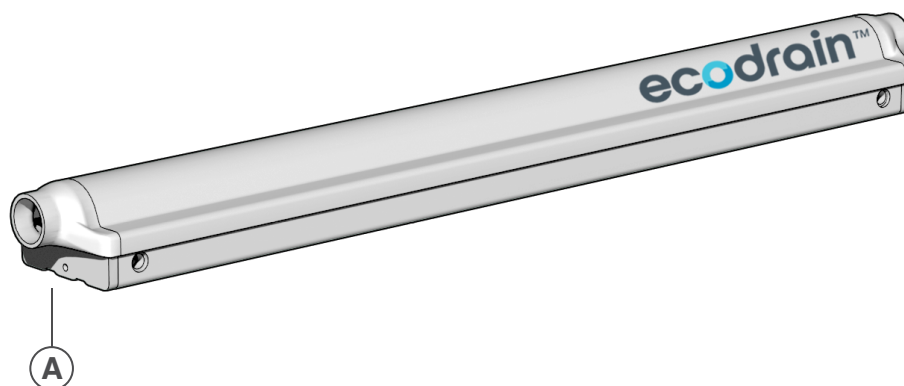
A1000 HEAT EXCHANGER

INSTALLATION MANUAL

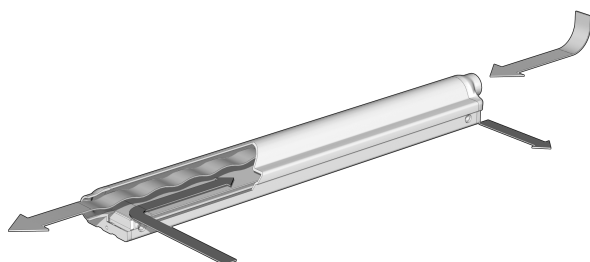


What's in the box

- (A) A1000 Heat Exchanger
- (B) Installation manual, data sheet and registration form



HOW DOES IT WORK?



The ecodrain is a simple device that uses the heat in waste water to preheat cold water. It is a completely passive device with no electrical connections. It relies on cold water pressure to move cold water through the device. It relies on gravity to move grey water through the device.

The ecodrain has a double wall of separation between cold water and grey water in order to ensure that the two never mix. The ecodrain is equipped with vent holes to warn user if there is ever a leak between the two walls of the device.

There are three options for piping of the preheated cold water out of the heat exchanger. The options have implications in terms of installation and heat exchange performance.

Remove Heat Exchanger from packaging and ensure there are no damages, no dents on the cover and the end caps at the ends are still intact. If the heat exchanger is damaged, please contact the distributor. Prior to installing the heat exchanger, run water from a garden hose through the heat exchanger drain connections and using clean white tissue paper or lint free cloth run it past the joint of the bottom and top covers of the heat exchanger, to ensure that during storage or transit there has been no damage resulting in leakage in the joint area. If the paper gets wet at any specific point along the joint, the Heat Exchanger should not be installed.

Flush the cold water inlet points as well with a garden hose. Run the water till the water is clear. The water will take a few seconds to exit because of the design inside the tubes.

Only experienced plumbers should install the heat exchanger. Review the installation schematics and decide how you wish to install it. Review the installation manual for minimum and maximum slope angles.

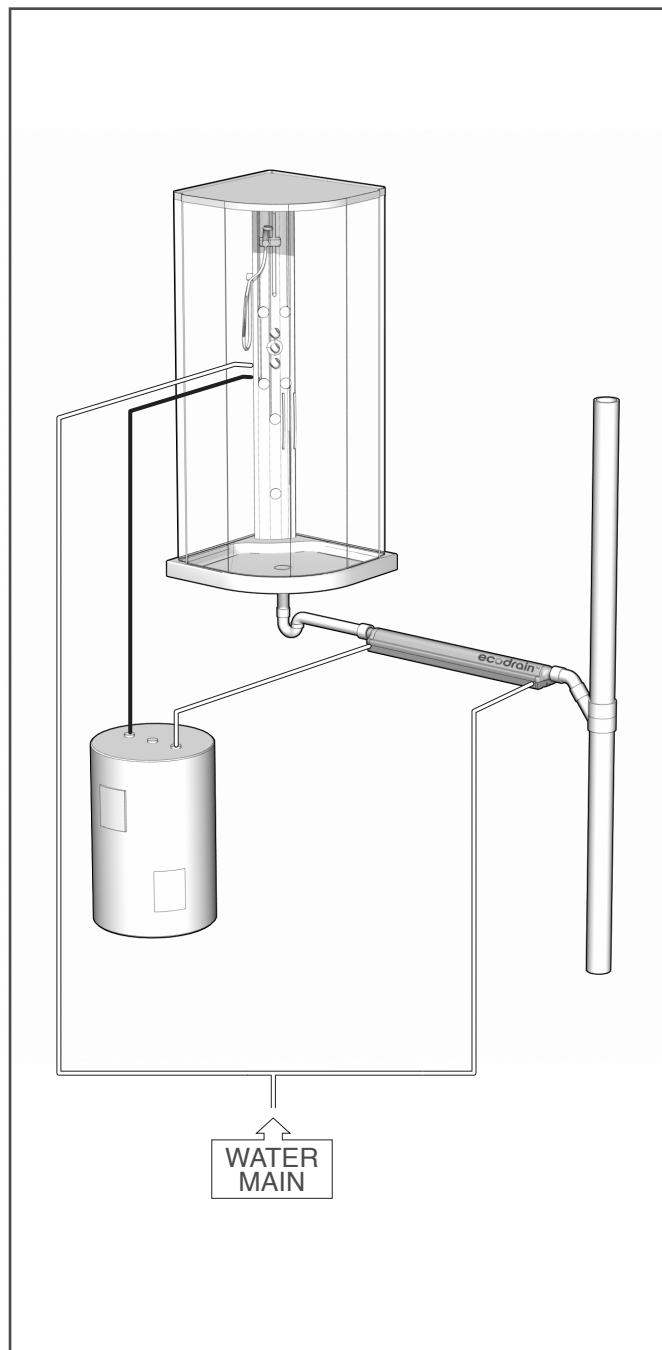
If you feel it is necessary that the heat exchanger is supported, provide for suspenders from a nearby ceiling, using at least two stirrups. For longer lengths, supports are required. The heat exchanger is not supplied with supports.

After installation, and curing of any adhesive (if used-follow manufacturer's instructions) run drain water for a few minutes through the heat exchanger and once again ensure that there is no leakage at the joints, in the piping connection.

The heat exchanger comes with a 1/8" NPT leak off connector, on either side, used to prove the leak path access of the double wall heat exchanger. It is advisable to plug the upper leak-off hole using the supplied plug. It is advisable to connect a transparent tube to the lower leak-off hole. The tube should be connected such that the user has access to it at some point so that it is possible to verify that there is no leakage.

A1000 HEAT EXCHANGER

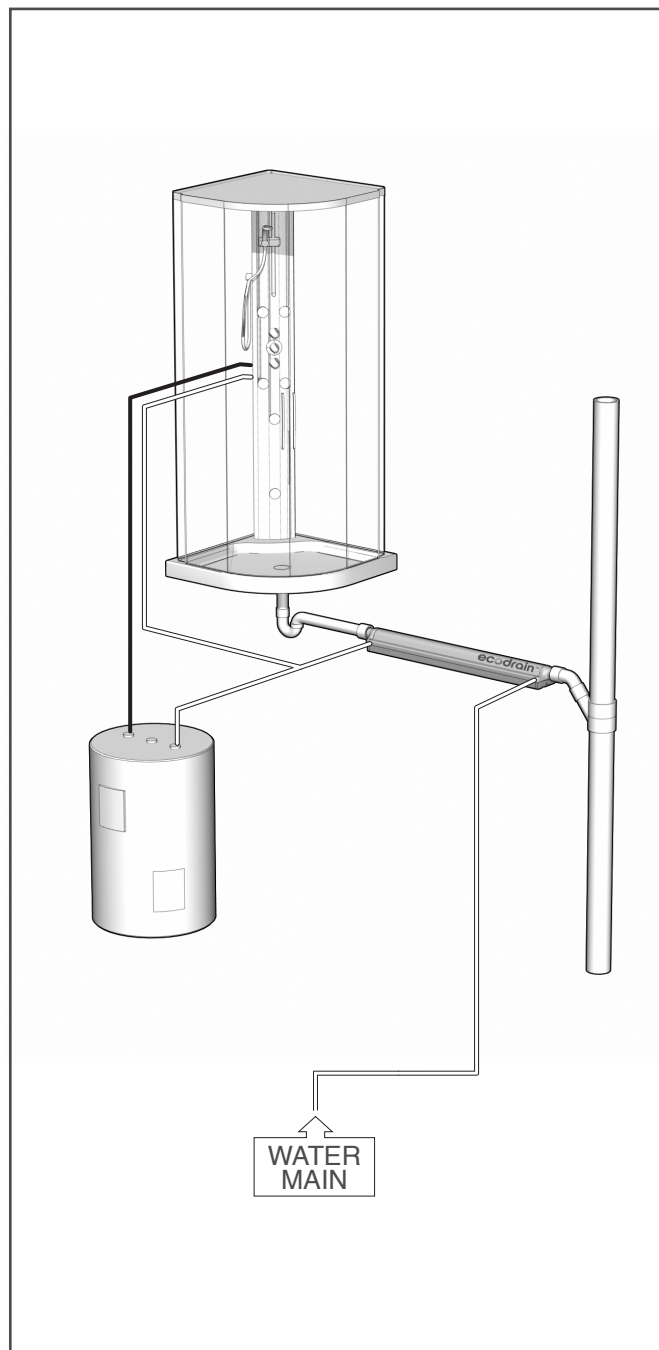
INSTALLATION MANUAL



OPTION A

Preheated water connected to input of cold water heater only.

This option is suitable when the heat exchanger is installed in close proximity to the water heater and far away from the fixture. In this case, the flow through the heat exchanger during a shower will be equivalent to the flow of water from the water heater.



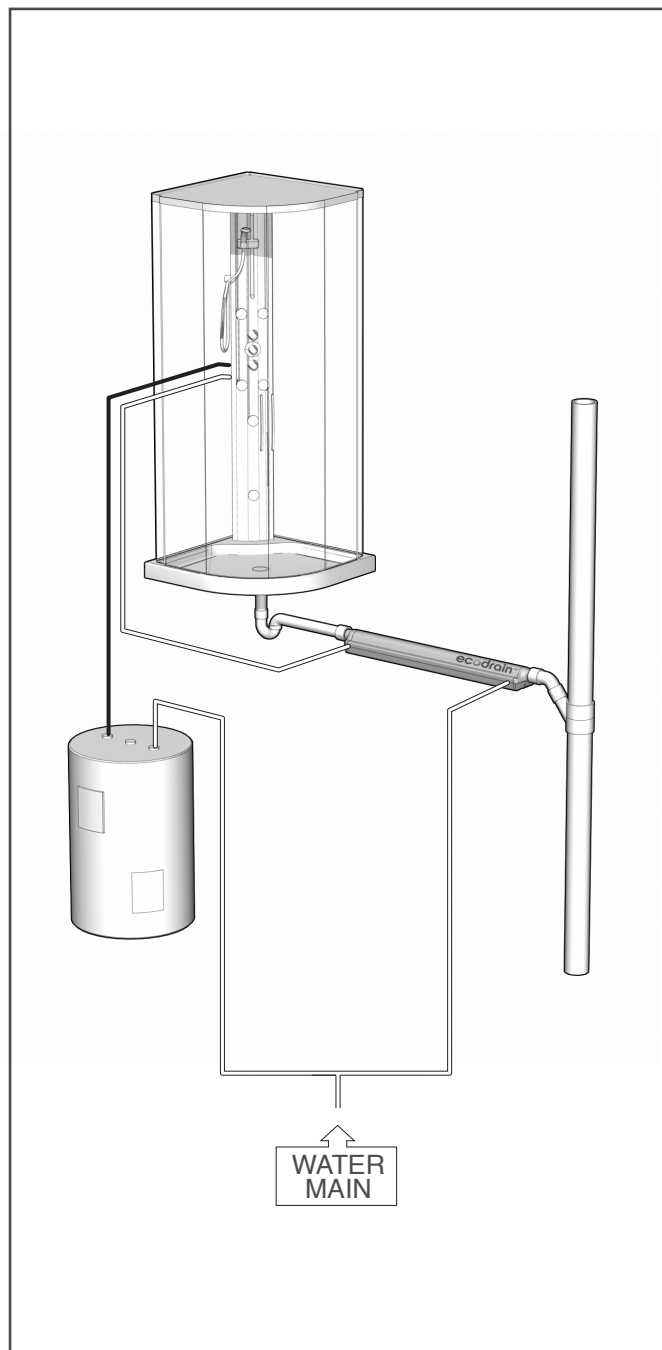
OPTION B

Preheated water connected to input of cold water heater and cold side of shower mixing valve.

This option will provide the most possible savings because it will maximize the cold water traveling through the device. In an ordinary shower, the cold water flow will match the flow of the shower. The higher flow of cold water through the heat exchanger will be heated to a lower temperature than in either of the other two configurations. However, since the flow is higher, the energy savings will increase.

A1000 HEAT EXCHANGER

INSTALLATION MANUAL

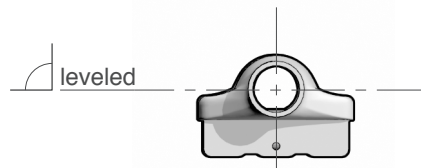


OPTION C

Preheated water connected to cold side of shower mixing valve only.

This option is suitable when the heat exchanger is installed close to the fixture (shower valve) but far away from the water heater. In this case, the preheated water will be supplied to the cold side of a shower valve. The ratio of preheated cold water to hot water will be higher. Since more preheated cold water will be used, less water from the water heater will be required for a shower of equivalent temperature and flow.

LEVEL

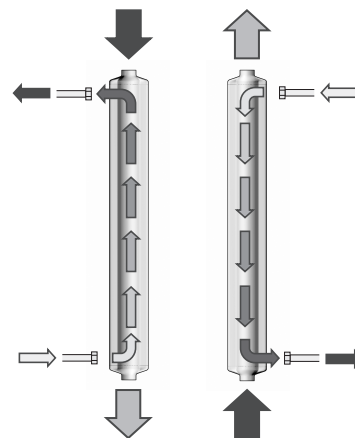


During the installation of the heat exchanger, a spirit level must be used at 3 points minimum along the length of the HE, to ensure proper leveling; otherwise the efficiency will be affected. The HE A1000 cannot be installed at a lateral tilt angle.

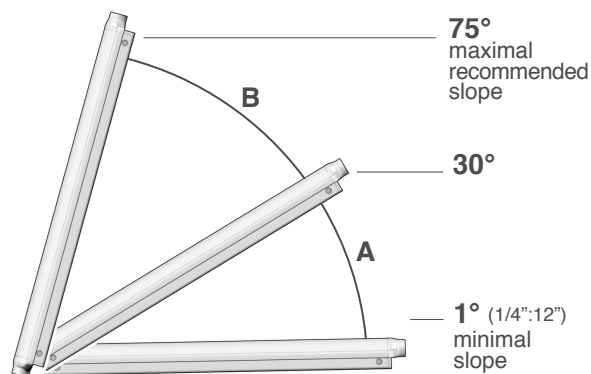
COUNTER FLOW DIAGRAMS

The A1000 series heat exchangers are symmetrical in the sense that either drain opening can act as the grey water inlet and either cold water opening can act as the cold water inlet.

For optimal performance, the grey water inlet and cold water inlet should be at opposite ends of the heat exchanger.



INSTALLATION SLOPE



Check with local codes in order to validate the minimum angle required. Note that heat transfer performance will increase as the tilt angle increases. This can boost heat exchanger performance by 5%-10%. The reason is that at a higher tilt angle, the waste water travels faster. This generates turbulence in the waste water flow and as a result the waste water gives off heat at a higher rate. With the A1000 unit, a maximum slope of 75° is recommended to allow an efficient heat transfer. Beyond that slope, some of the grey water will travel down the center of the exchanger and will have reduced contact with the heat transfer tubes.

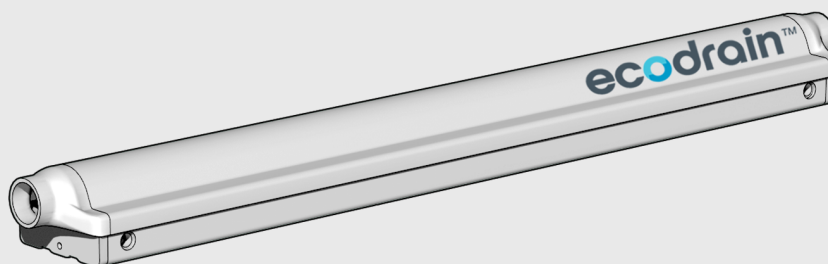
A1000 HEAT EXCHANGER

INSTALLATION MANUAL

SERIAL NUMBER



Prior to installing the heat exchanger, please take down the serial number on the name plate and other installation details and store it in an accessible place.



SERIAL NUMBER :

DATE :

INSTALLATION BY :

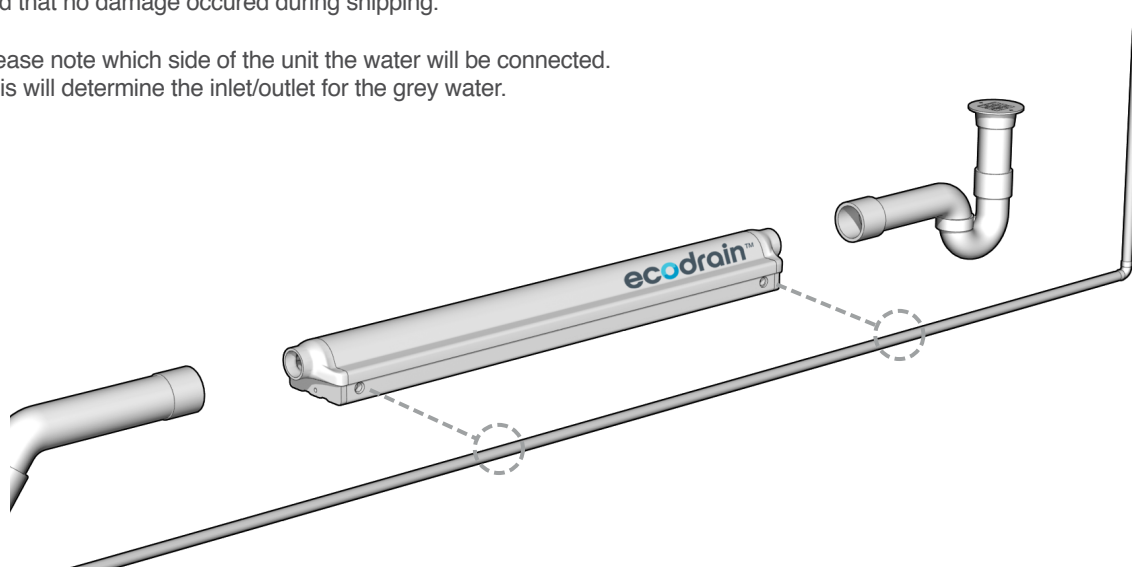
MODEL NUMBER:

INSTALLATION PROCEDURE

STEP A - VISUAL INSPECTION

Run water through Heat Exchanger to ensure that unit is leak-tight and that no damage occurred during shipping.

Please note which side of the unit the water will be connected. This will determine the inlet/outlet for the grey water.

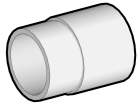


A1000 HEAT EXCHANGER

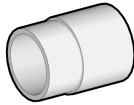
INSTALLATION MANUAL

STEP B

Mount grey water adaptor for both inlet and outlet.



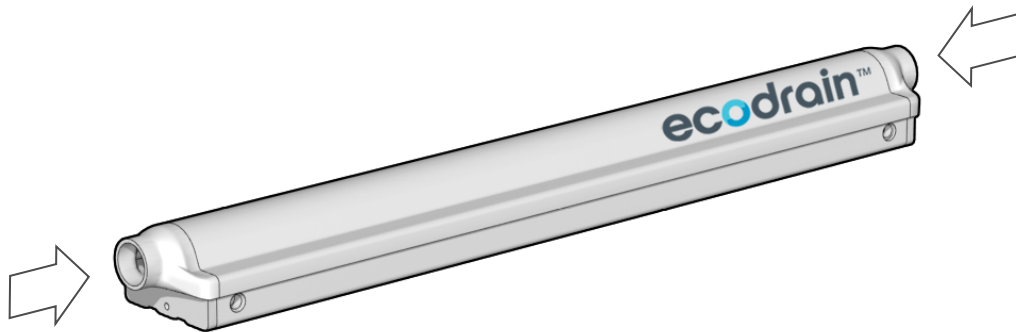
1. ABS adaptor



2. PVC adaptor



3. Mechanical clip



STEP C

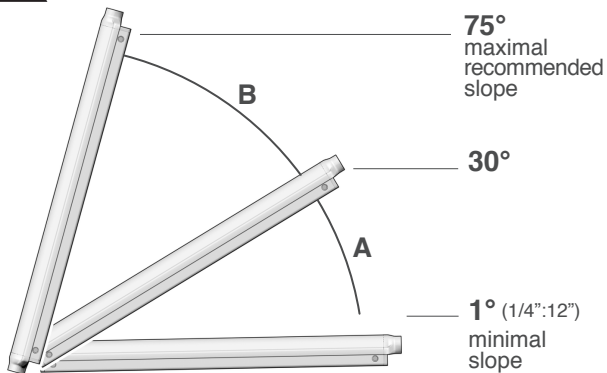


Fig 1.1

Minimal slope requirement:

In order to insure optimal performance. The unit must be installed with a minimal slope (fig 1.1). With the A1000 unit, a maximum slope of 75° is recommended to allow an efficient heat transfert.

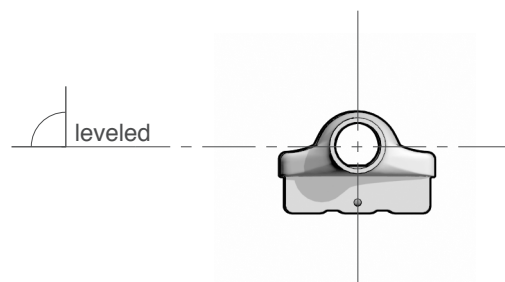


Fig 1.2

Remember :

The HE A1000 cannot be installed at a lateral tilt angle. Level horizontally (fig 1.2).

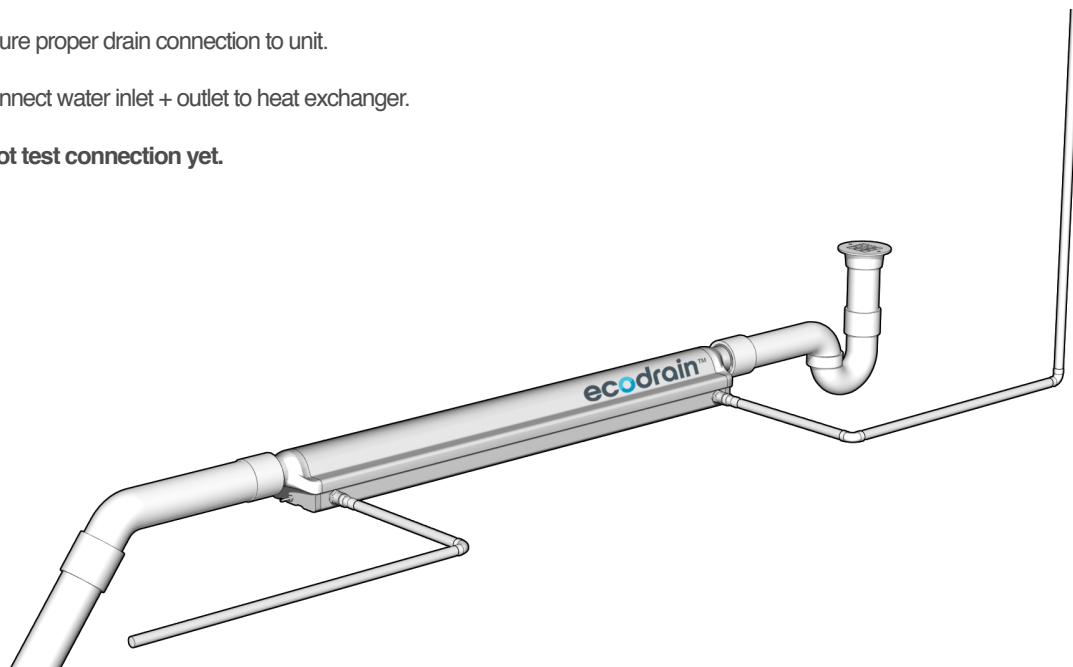
A1000 HEAT EXCHANGER

INSTALLATION MANUAL

STEP D

1. Insure proper drain connection to unit.
2. Connect water inlet + outlet to heat exchanger.

Do not test connection yet.



STEP E



Before testing all connections, make sure unit is secured.
Note that a working unit at full capacity could weigh up to 30lbs (14 kg).

