

## Potable water connection

Install required fittings to the cold water side of the ThermoDrain®. Units come ready for sweat fitting installation. A maximum temperature of 275°C is allowed during the installation of the fittings. **Warning:** Do not use quick connect or push-in type or compression type or press type fittings. For ThermoDrain® with 1/2" tube, use only 1/2" Copper x 3/4" PEX size fittings with 3/4" PEX tubing.

The cold water inlet is located at the bottom of the ThermoDrain®. Do not connect otherwise as units are designed as counter flow heat exchangers. The preheated water outlet is located at the top of the ThermoDrain®. Connect this outlet to supply the selected plumbing fixtures.

## Connection to a plumbing device

The preheated outlet of the ThermoDrain® should not supply a branch of the plumbing system located before a water softener or filtration equipment nor to the cold inlet of a central thermostatic mixing valve if one is present (usually located near the water heater). If a local thermostatic mixing valve is used to limit the shower or bath temperature only, adjust after installation is completed.

Though it may be practical to connect the ThermoDrain® preheated water outlet to the entire bathroom cold water supply, be aware that this will have the effect of providing lukewarm water at the cold fixtures in the bathroom during shower operation. Therefore the following configurations are recommended for single unit residential use.

## Installation with a single shower:

ThermoDrain® with 1/2" tube should be installed in configurations #3 or #4 and as per local code. ThermoDrain® with 3/4" tube can be installed in any of the configurations as per local code.

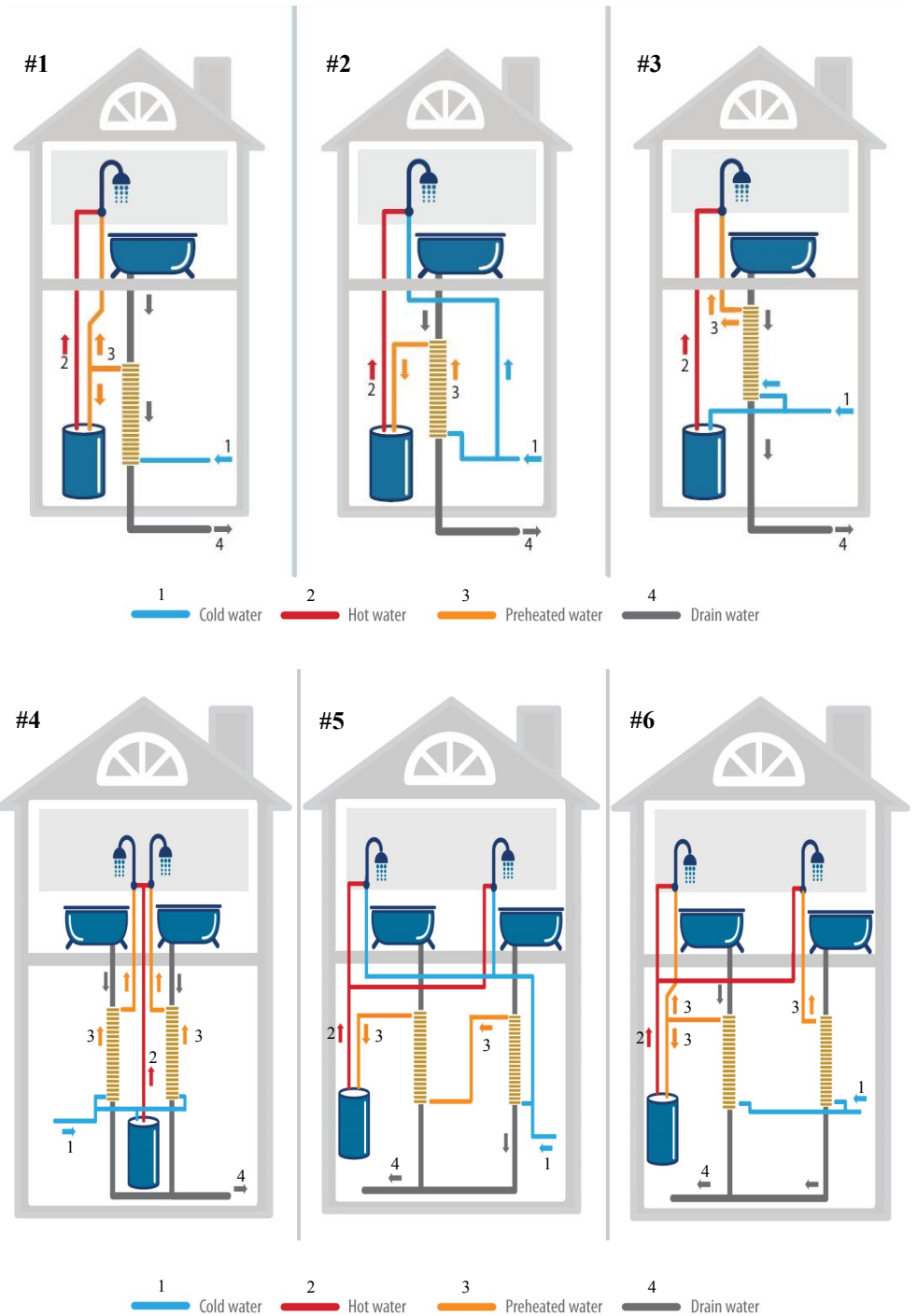
1. PREHEAT TO THE WATER HEATER AND SHOWER (Equal flow). The preheated water from the unit is fed to both the hot water tank cold inlet and to the cold shower supply. This is the most efficient installation. Note: This configuration is NOT allowed in the province of Quebec.
2. PREHEAT TO THE WATER HEATER SUPPLY. The preheated water from the unit is fed to the hot water tank cold inlet ONLY. This configuration is useful when access to plumbing is restricted or based on the plumbing system layout. Efficiency will be slightly lower than that of configuration #1.
3. PREHEAT TO THE SHOWER COLD WATER SUPPLY. The preheated water from the unit is fed to the cold shower side ONLY. This configuration is useful when access to plumbing is restricted or based on the plumbing system layout. Efficiency will be slightly lower than that of configuration #1. Note: This configuration is NOT allowed in the province of Quebec.

## Installation with two (2) showers:

If two showers use a common drain stack apply any of the above configurations #1 to #3.

4. PREHEAT TO THE SHOWER COLD WATER SUPPLY. If two showers on the same or different levels use separate drain stacks the preheated water from the units is fed to each cold water side ONLY. Note: This configuration is NOT allowed in the province of Quebec.
5. PREHEAT TO THE WATER HEATER SUPPLY. If two showers on the same or different levels use separate drain stacks the preheated water from the units is fed to the hot water tank cold inlet ONLY. This configuration are useful when access to plumbing is restricted or based on the plumbing system layout.

6. HYBRID PREHEAT. This is a hybrid connection between #4 & #5 that allows for easy installation in larger homes. Note: This configuration is NOT allowed in the province of Quebec.



## Caution!

Do NOT install the unit other than in a vertical position as this will render the device inefficient.

Do NOT cut an existing drain stack without ensuring that the upper and lower pipes are properly supported beforehand as this may lead to serious injury or system failure. Stacks with cast iron pipes may require particular attention as weight can be significant.

ThermoDrain® units with 1/2" tube are designed for a 2.5 gpm nominal showerhead flow. High flow or multi-head fixtures are not recommended with these units. The system should have a minimum supply pressure of 30 psig.

The temperature to make the joint on the sweat fitting should never exceed 275°C as this may cause brazed coil attachment breakage and potential injury.

NEVER attempt to dismantle a unit or a component of the unit or make a repair to a damaged unit as significant tension is present in the coiled tube. Uncoiling may lead to serious injury. Never install a damaged unit.

## Limited warranty

EcoInnovation Technologies Inc. takes great care in the design and delivery of its products. When the product is used for its intended purpose (standard residential/commercial plumbing system operating temperature and pressures, the use of non-caustic or corrosive or high mineral content drain water) the manufacturer offers a limited non-transferable warranty of ten (10) years on all products against manufacture defects from date of purchase. The accessories manufactured by a third party and supplied with the ThermoDrain® are covered by their respective manufacturer warranties and are not covered by the above EcoInnovation Technologies Inc. warranty. EcoInnovation Technologies inc. assumes no responsibility with regards to these components.

If, during the warranty period, a defect due to manufacturing or workmanship occurs that is covered by this warranty, EcoInnovation Technologies inc. will proceed, entirely at its discretion, with the repair or replacement of the defective unit. Since the installation and use of the ThermoDrain® is outside of the control of EcoInnovation Technologies Inc., no warranty is offered by the manufacturer for problems resulting from installation. It is the responsibility of the purchaser to properly select the product and to ensure that the product and installation procedures conform to local laws and codes in effect.

In no case is EcoInnovation Technologies Inc. responsible for prejudice to material, direct or indirect or as an accessory to other damages and/or expenses accrued, even if foreseeable, and even where resulting from the confirmed failure or the apparent or defect known by the purchaser, of all products or accessories distributed or sold by EcoInnovation Technologies Inc. In no case is EcoInnovation Technologies Inc. responsible for premature wear of its products due to the properties of the products used in conjunction with its products. It is the purchaser's responsibility to ensure that the products used in conjunction with the ThermoDrain® are compatible with its specified intended design and use. The warranty in this document is non-transferable. The warranty will not be honored if the original serial number assigned by EcoInnovation Technologies Inc. is not legible or has been removed or has worn away with time. EcoInnovation Technologies does not offer any warranty on the optional components, other than those installed during manufacture of the ThermoDrain®.

This warranty does not cover defects caused by damage in transit, abuse, accident, negligence or repairs made by others. In the case of a defective product, contact the reseller in your area where you originally purchased the unit. All repairs or modifications made without the specific written authorization of EcoInnovation Technologies Inc. will render this warranty void without prejudice against EcoInnovation Technologies Inc.



## DETAILED INSTALLATION GUIDE FOR THERMODRAIN DRAIN WATER HEAT RECOVERY UNIT

## Warning

Carefully read the instructions before starting the installation of the ThermoDrain® and proceed with the inspection of the unit for signs of damage in transit. Refer to the technical or installation drawing provided by the general contractor for references on installation. The installation must be done by a licensed professional with knowledge in plumbing and construction and applicable codes. The plumbing system must be shut off and guarded against accidental pressurization or drainage events during the entire installation process. No accessories need be installed for typical applications. However, the installer is responsible for any code requirements for things such as bypass valves, access traps, supports, etc.

## Installation

Refer to National and Local Code requirements prior to installation. The ThermoDrain® must be installed in a vertical position ONLY. Any other position will render this device ineffective. A maximum deviation of 1/8" (3mm) per linear foot (305mm) from vertical is acceptable. Provide suitable support for the ThermoDrain such that the weight of the unit either rests on rigid and supported pipe work or is attached to the wall or ceiling by hangers. The unit may NOT hang from the upper mechanical coupling. If a wall or ceiling support is required, clamps or hangers in direct contact with the unit shall be copper or with non metallic coating to prevent galvanic corrosion. Properly support the upper and lower part of the drain pipes BEFORE cutting into the drain stack. If an expansion joint is installed on the drain stack it should be placed above the ThermoDrain unit to minimize support requirements where allowed. Do NOT install unit in a location where freezing may occur. Pressure test the plumbing system upon final assembly.

## Insulation

Unless insulation is required by the applicable codes or is specified by the technical requirements it is not necessary to insulate the ThermoDrain® as this will only marginally increase the effectiveness. However insulation will greatly reduce condensation on the ThermoDrain® under certain conditions as it would with any copper pipe with cold water flow. When insulation is required, please order the ThermoDrain insulation kit or use insulation impervious to moisture. Refer to local code requirements.

## Drain connection

The ThermoDrain® must have the same nominal diameter as the host drain pipe. Since the heat exchanger is symmetrical, any end can be installed upwards unless noted "TOP" on the unit. A straight section of drain pipe at least 12" (305mm) in length is recommended above the ThermoDrain® to ensure best efficiency. Only 3" (76mm) of pipe are required at the bottom to allow for installation of the mechanical coupling. The distance between the upper and lower drain pipe ends should be approximately 1/2" (12mm) longer than the height of the ThermoDrain® unit being installed. The drain stack must be located at least 1" (25mm) from a wall to allow the ThermoDrain® installation. Supplied mechanical couplings may be used with plastic or cast iron stacks and should be tightened to 60 lbf.in. The upper mechanical joint connecting the drain pipe to the ThermoDrain® should be inserted all the way into both pipes to ensure proper water film formation. To install the lower mechanical joint first remove the stainless steel band and slip it over the plastic drain pipe. Install the mechanical joint on the plastic pipe and on the ThermoDrain®. Slip the stainless steel band back on the joint and tighten. Check the vertical mounting again and adjust as required to meet specification. Check that unit is properly supported.