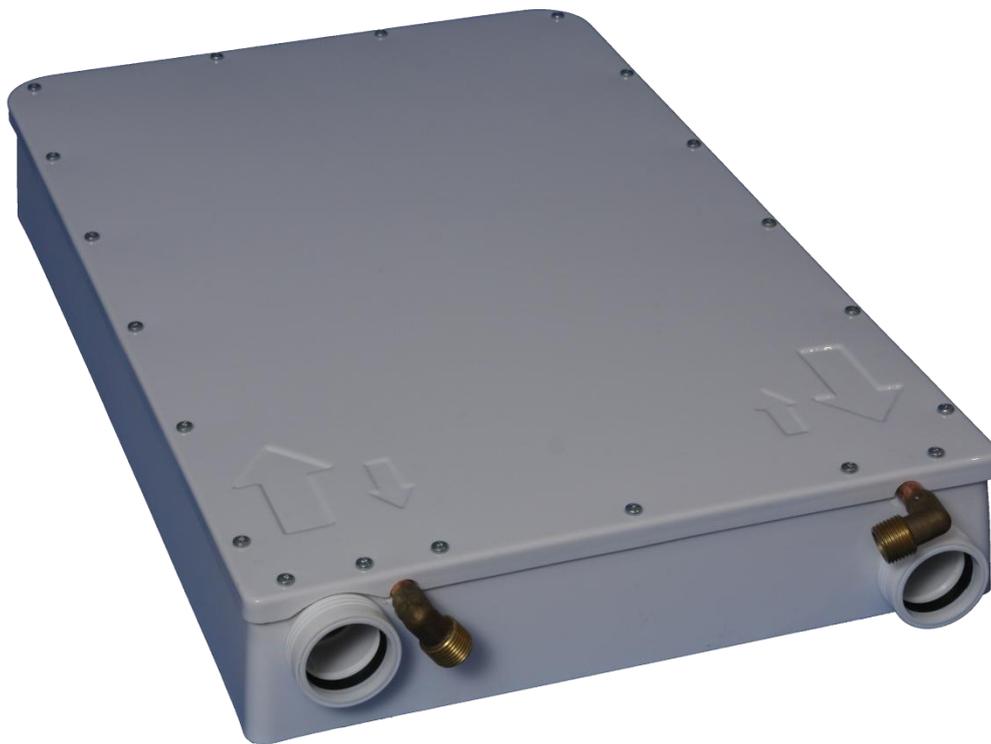


HeatSnagger

Installation and maintenance manual



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Document revision history

| Document revision | Date | Author | Comment |
|-------------------|-------------|----------------|--------------------------------------|
| 0.1 | 30-Oct 2011 | Arthur Kimmels | Initial version for review |
| 1.0 | 13-Nov 2011 | Arthur Kimmels | First version for publication |
| 1.1 | 06-Des 2011 | Svein Medhus | Minor adjustments |
| 1.2 | 03-Jun 2014 | Arthur Kimmels | Added comment air gap in floor drain |
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Introduction

The HeatSnagger is a simple and small heat exchanger that can be placed under a shower cabinet to capture some of the heat that is still in the water flowing into the shower drain. It works by preheating the cold water flowing into the shower mixing valve by extracting some heat from water flowing into the drain.

This document presents the technical specifications of the HeatSnagger and how it should be installed and maintained.

Due to the large variety in shower cabinets and layout of bath rooms, each installation will be different but the main steps in connecting the HeatSnagger will be the same and are described in the following sections.

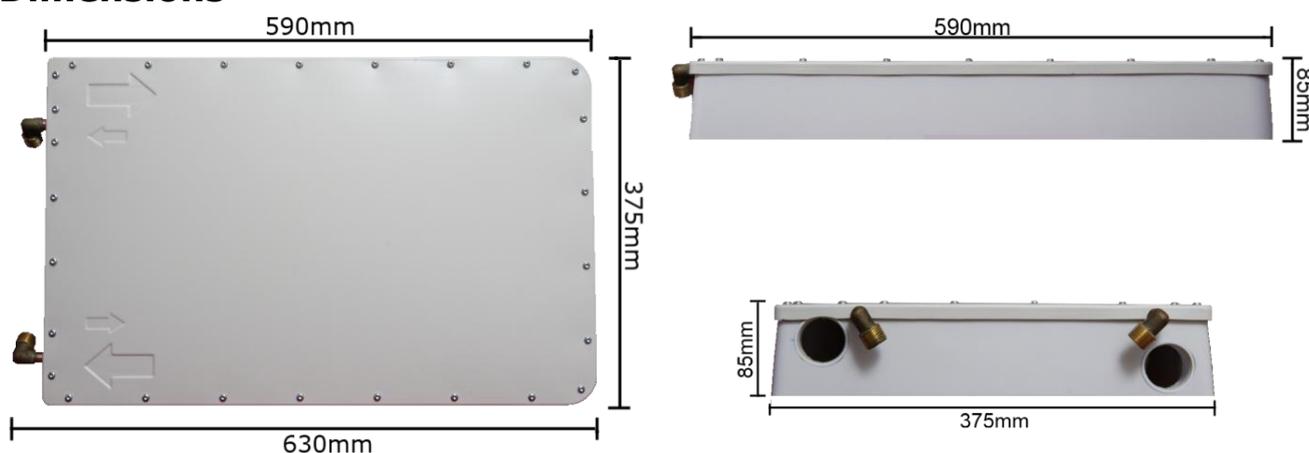
Prior to installation

Check the following:

- Form factor cabinet:
 - Size and form as compared to size and form of HeatSnagger. Clearly, larger cabinets e.g. 90x90 cm allow for an easier installation.
- Placement of legs
 - Leg spacing should allow HeatSnagger to be pushed in
- Height of legs
 - The height of the legs is normally adjustable. Check if 85mm is available between bottom of cabinet and floor.
- Cabinet drain in relation to floor drain
 - Enough place in between for HeatSnagger. Plan routing of drain hoses.
- Installation of cold water connection to cabinet, type of connection, size
 - Normally this would be a flexible hose with 1/2" female connection at cabinet side and 1/2" or 3/4" female connection at wall side.
- Recommended to be installed in room with floor drain

HeatSnagger specifications

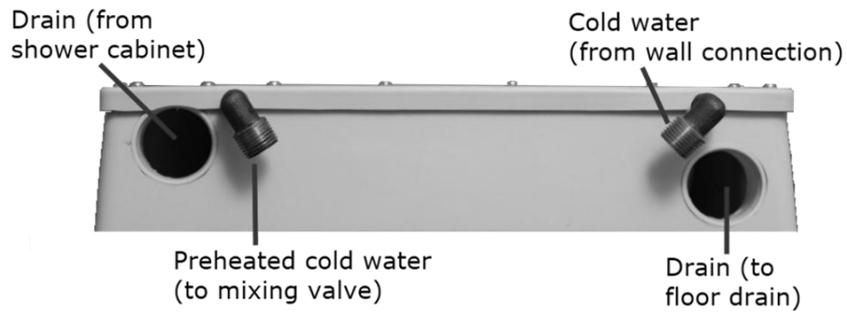
Dimensions



- Weight: ca. 3 kg
- Max. temperature: 80°C
- Max. pressure (cold water): 16 bar

Connections

- cold water and preheated cold water: 1/2" male
- drain (2x): 40mm female



Components and tools for installation



- HeatSnagger
- 2x flexible hoses (PEX) of suitable length (typically ca. 2m) for cold water supply (1x if cold water hose from cabinet can be used).
- 2x flexible and/or extendable hose for drain water (1x if drain hose from cabinet can be used)
- Spanner

Installation procedure



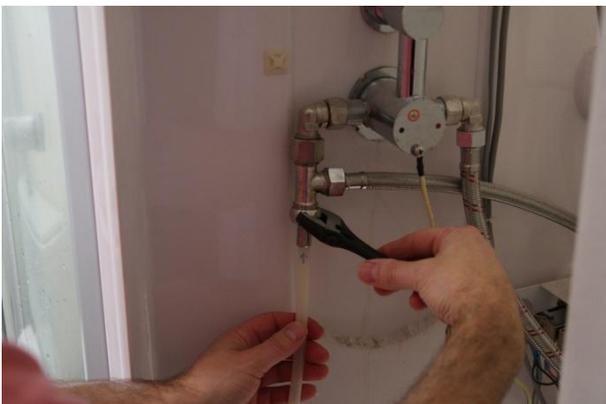
- Remove front panel of cabinet
- Verify available space for the HeatSnagger
- If necessary, increase leg height as much as needed.
- If height is not sufficient, consider placing rubber blocks under legs.



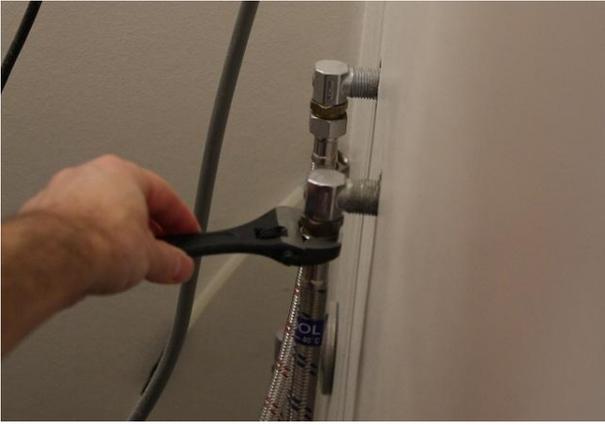
- Close main water valve
- Move cabinet from wall to be able to reach the cold water supply
- Locate flexible hose that carries cold water from wall connection to cabinet mixing valve



- Disconnect hose at cabinet side



- Attach PEX hose #1 at cold water input of shower cabinet
- Make a mark on other end of this PEX hose to indicate connection to the shower mixing valve



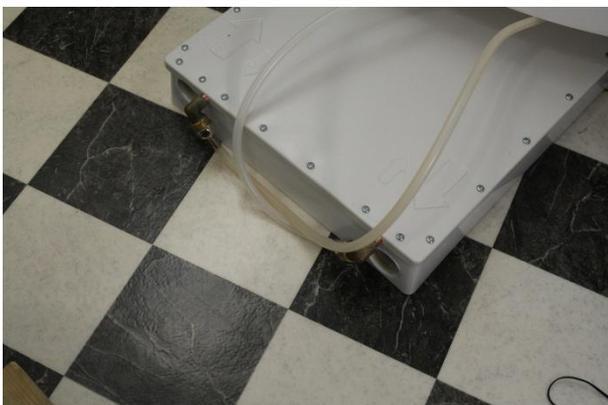
- Disconnect hose at cold water connection at wall



- Attach PEX hose #2 at cold water connection at wall
- Push PEX hoses under cabinet and move cabinet back to original position
- Pull PEX hoses out from under the cabinet



- Locate drain hose from cabinet to floor drain and pull out of floor drain
- Verify if it can be used into the HeatSnagger
- If not, disconnect from cabinet and replace with one of the flexible drain hoses.
- Verify how the 2nd drain hose can be guided from the HeatSnagger to the floor drain
- The outlet of the drain hose should not be under the water level in the floor drain. There should be an air gap of at least 1cm (1/2").



- Place HeatSnagger under cabinet, while still having access to the 1/2" fittings
- Connect PEX hoses to 1/2" fittings

Important:

- PEX hose from wall must be connected to the 1/2" fitting where the small arrow is pointing into the HeatSnagger
- PEX hose to cabinet must be connected to the 1/2" fitting where the small arrow is pointing out off the HeatSnagger. (This is the previously marked PEX.)



- Push HeatSnagger under shower cabinet
- Connect the drain flexible hoses to HeatSnagger

Important:

- Drain hose coming from cabinet into the 40mm connection where the big arrow is pointing into the HeatSnagger (left in the picture)
- Drain hose to the floor drain into the 40mm connection where the big arrow is pointing out of the HeatSnagger (right in the picture).
- Use some dishwashing liquid in the 40mm connections of the HeatSnagger if the drain hoses are hard to insert.



- Make sure that the drain flexible hoses have a gradual fall or lay horizontally, no dips or bending upwards.
- Use cut-out pieces of supplied foam material to support hoses, if necessary.
- Re-attach cabinet front panel



Notes:

- Use of flexible hoses for the drain connections simplifies installation. Fixed pipes and fittings (elbows, bushings) have the advantage of less water flow resistance, and might be a good choice when showering with large flow.
- Use of flexible (PEX) hoses for the cold water connections simplifies installation. In case of too high pressure drop (limiting shower flow too much) an installation using fixed (copper) pipes should be considered.

Maintenance

The HeatSnagger has been designed to minimize built up of hair, soap residue and debris inside its channels. The water flow is relatively fast and the walls of the channels are smooth. Still, some built-up of material over time should be expected. This will reduce the effectiveness of the heat exchanger.

The following maintenance procedure is suggested:

- Verify that the cabinet drain has a hair filter that reduces the amount of hair getting into the HeatSnagger. If it's not there, it is strongly recommended to add one.

Every 2 months:

- Use 1-2 litres of hot water (re-use waste water from boiling potatoes or pasta) and apply into the cabinet drain in 2 stages, with circa 5 minutes between (This helps dissolve soap residues on the copper pipes in the HeatSnagger). Use shower shortly after to make sure debris is flushed away.
- Note: too hot water (>70°C) might damage the drain pipes and/or the HeatSnagger!

Every 1-2 years:

- If practically possible, remove the HeatSnagger from under the cabinet, unscrew the lid and mechanically clean (with a brush or scouring pad). Re-apply lid, use moderate force on the screws. Stop screwing when resistance is encountered. Do not use power tool for this!

If no maintenance is carried out, the HeatSnagger will still work, but the efficiency will decrease over time.