

HEATIT[®]

SMART INSTANT HOT WATER RECIRCULATING SYSTEM

HIP 24-12A



HEATITCABLE.COM

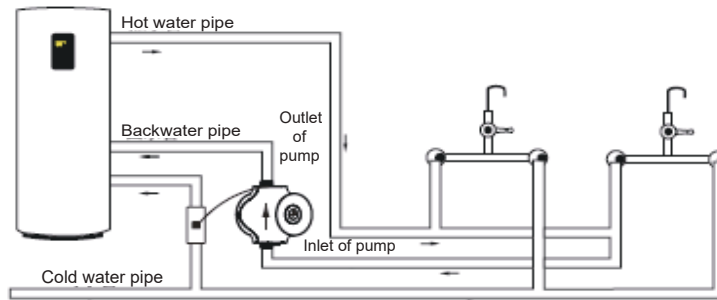
Table of Contents

Product Overview	2	General Installation Instructions.....	3
Product Features	2	Commissioning	5
Product Contents	2	Troubleshooting	6
Important Safeguards and Warnings.....	3		

Product Overview

HEATIT Smart Instant Hot Water Recirculating System help you to save gallons of water in waiting for water warm up each year. Up to 10% of your water bill will be saved. You can get the instant hot water when you need it. No more water wasted in waiting. HEATIT smart pumps bring you convenience and savings.

HEATIT HIP 24-12A smart pump was designed to be installed on the back water pipe to the water heater (see the picture 1). If there is no back water pipe to water heater in your water loop, you may need HEATIT HIP 24-12B to be installed under the faucet furthest from the water heater in each loop.



picture 1

Product Features

- HEATIT HIP smart hot water recirculating pump adopts a plastic-sealed permanent magnet synchronous motor with ultra-low safe voltage (24V). The shell is made of die-cast aluminum with high strength and anti-aging. The pump head is made of lead free grade copper material, durable and rust-free, protecting the health of your whole family.
- Easy to install with the necessary accessories included. 10' power cord. Built in thermostat. Maintenance free. Can be used with all types of pipe.
- Three modes can be chosen: energy-saving mode, smart mode and manual mode. When the water temperature in the pump is lower than 33 °C, the pump will push the cold water back to the water heater. As the temperature hits 38 °C, the pump will stop working.
- Advanced motor technology: Permanent magnet brush less motor DC motor makes the pump more powerful, more quiet and more durable. (Max flow 6 GPM, Max head 39.3ft)

Package Contents

Package Contains the following:

- Smart Hot water recirculator pump with build-in thermostat
- Hook: 2x
- Self-tapping screws: 2x ST3.5x9.5
- Expansion screw: 2x M6×30
- Power adapter: 1x 24V/3A
- Installation and Operating Instructions
- Filter(optional)

IMPORTANT SAFEGUARDS AND WARNINGS



Thank you very much for choosing our products. Please read the Instruction Manual carefully and keep it properly before installation and use.

Important safeguards and warnings

- Please read the Instruction Manual and keep it properly before installing and using the product.
- The electric pump must be reliably grounded before use, and leakage protection devices should be installed.
- It is forbidden to touch the electric pump during operation.
- Dry running of the electric pump is strictly prohibited.
- It is strictly prohibited for children, and persons with no capacity or limited capacity to use the product without supervision of guardians (such as not being taught the safe use method of the product and understanding the risks involved).
- The pump system must be able to withstand the maximum pump pressure.
- The manufacturer shall not be held responsible for any consequences caused by the user modifying the electric pump without authorization or operating the electric pump beyond the operating conditions.

GENERAL INSTALLATION INSTRUCTIONS



The product is installed in the backwater pipeline of the water heater.

Conveying liquid

The conveying liquid is softened water and thin, clean, non-corrosive, non-explosive liquid without solid particles, fibers and mineral oil, and the PH value of the medium is between 6.5 and 8.5.

The requirements for the operation system of the electric pump are shown in the following figure 2 :

Medium and ambient temperature

The system temperature (t1) must be always higher than the ambient temperature (t2) in order to avoid electrical short circuit of junction box caused by condensation of pump body(see figure 3).

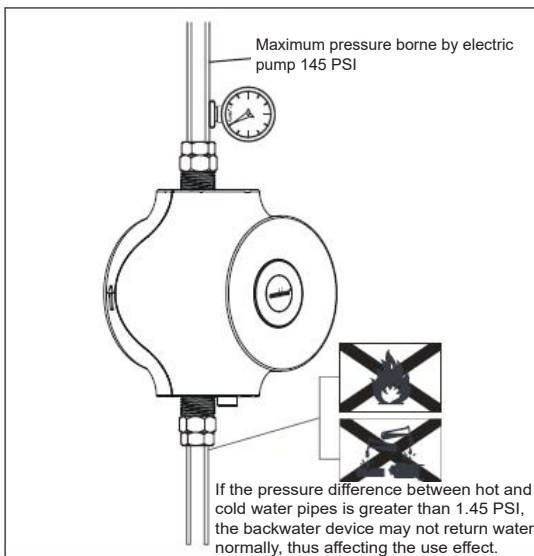


figure 2

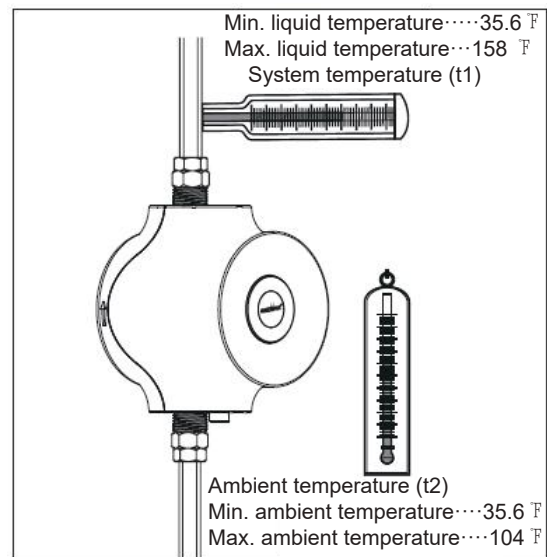


figure 3

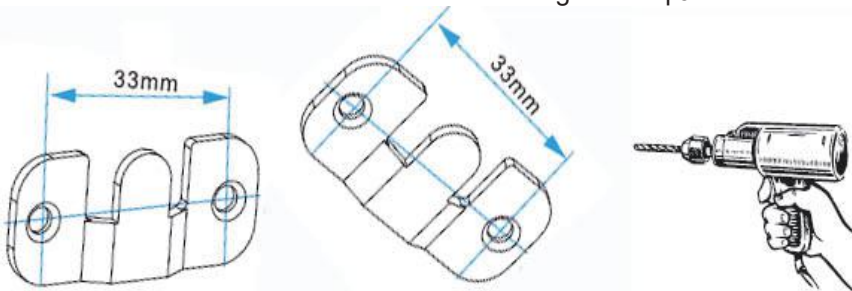
GENERAL INSTALLATION INSTRUCTIONS

Installation tips

1. Before installing the pump, check whether the pipeline system is connected reliably and ensure that impurities, welding slag, dirt and the like in the pipeline have been removed. The output of the voltage adapter is low-voltage DC 24V. During installation, a filtering screen can be installed at the inlet of the recirculating pump to filter large particles and impurities in the water, and the filter screen shall be cleaned regularly. It depends on the pipe water situation. You can choose to install or not. If the water in the pipe is always clean, you don't need to install this screen.
2. The HIP24-12A pump must be installed or maintained by a professional plumber. Install the pump according to the installation diagram of the HIP24-12A pump. Pay attention to the water pipe connection between the water inlet and the water outlet. After installation, check the HIP24-12A pump and all water pipe fittings for water leakage. The HIP24-12A pump shall be prevented from being splashed by water to avoid electric shock.
3. After connecting the power adapter, conduct a test run of the recirculating pump to check whether the startup is normal, but the nonwater running time should not exceed 5 seconds to prevent the operation from reducing the bearing life.
4. When the HIP24-12A pump works, if you want to adjust the position of or touch the recirculating pump, the power supply must be the first cut off to prevent accidents.
5. Carry out regular inspection and make replacement in time when damage occurs.
6. If the HIP24-12A pump is not used for a long time or no one is at home, please close the water pipe valve at the inlet and outlet end and cut off the power supply of the recirculating pump.
7. Cable or power adapter, when damaged, must be replaced.
8. In winter, when the ambient temperature is lower than 0°C, if the electric pump stops running, the water in the pipeline system must be drained to prevent the pump from freezing and cracking.

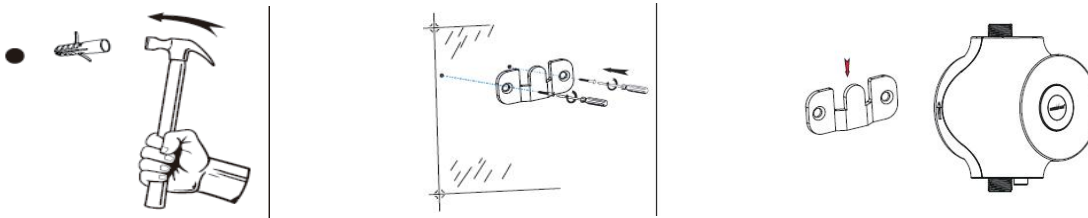
Installation steps

1. For Electric Water Heater : Turn off Power to your Water Heater. (turn off power at breaker box). For Gas Water Heater : Turn off the gas to your water heater and ensure that the pilot light is not burning. Shut off the supply water valve to the water heater. In most cases, the supply water valve located above the hot water heater on the cold water inlet to the hot water heater.
2. Drain the water from the backwater pipe by opening a cold water faucet in the house. Let the water run until it stops flowing. Then drain remaining water from hot water heater spigot. Leave the faucet open until the pump installation is complete. If water does not stop flowing, check to make sure the water to the hot water heater has been completely shut off.
3. Disconnect the backwater pipe with the water heater.
 - 3.2 (optional) Find a suitable installation position (on the back water pipe near the water heater end). When installing the water pump support plate in advance, the support plate can be placed in the pre-installation position and marked with a marker at the installation hole. The drilling size is $\phi 6$.



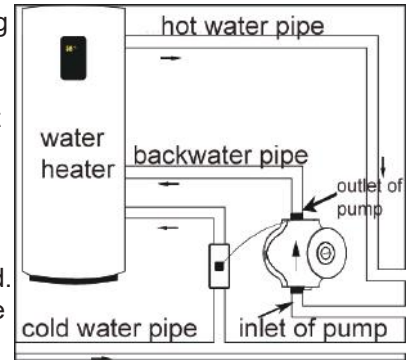
NOTE: THE METAL HOOK ON THE WALL CAN'T BE INSTALLED VERTICALLY. PLEASE INCLINE THE HOOK.

- 3.3 Insert the plastic expansion screw into the hole drilled in the wall.
- 3.4 Fix the support plate on the wall with self-tapping screws.
- 3.5 Clip the pump onto the hook of the support plate indicated by the arrow.



GENERAL INSTALLATION INSTRUCTIONS

- Install pump onto the backwater pipe, using the 3/4" female fitting and gasket ensuring that the pump shaft is horizontal. The pump should be installed so that the pump is pumping away from the hot water heater, towards the house. Confirm the direction of pumping by observing the flow arrow on the side of the pump housing. Be sure that the pump is not touching the exhaust vent piping (chimney) of a gas or oil-fired hot water heater. (See Picture #2)
- Connect the backwater line to the 3/4" NPT inlet of the pump. Use pipe dope or Teflon tape to seal threads when connecting to a 3/4 female NPT connection. If a gasket flexible copper water heater connector is used pipe dope or Teflon tape is not required.
- Reopen the supply valve to the hot water heater and allow the water to run until all the air has been purged from the piping.
- Close faucet inside the house. page 2 Picture 1 Disconnect Direction of water
- Plug the line cord of the pump into a 115V outlet. Be sure to route the power cord so that it does not touch the exhaust vent piping of a gas or oil-fired hot water heater.



Picture 2

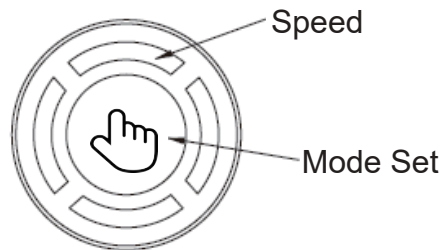


Key points of installation: remember to open the valve of cold water pipe/hot water pipe/return pipe after installation.
DO NOT Mount Motor Shaft in Vertical Position






Commissioning

Panel description



Function description

Mold name	Mold description
Smart constant temperature mode	When turned on, the  icon lights orange, and the pump operates at constant temperature throughout a day.
Energy-saving constant temperature mode	When turned on, the  icon lights green, and the pump operates at an energy-saving constant temperature state throughout a day. HEATIT Smart pump can decrease the temperature setting point automatically if you didn't use the hot water for some time.
Manual mode	When pressing the  icon briefly in any state, the pump will stop after reaching the set time or target temperature.

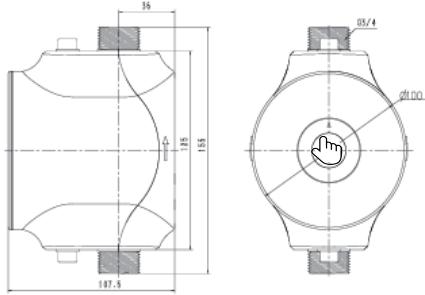
Function name	Function description
Mode switch	Smart constant temperature mode (orange light), energy-saving constant temperature mode (green light), Manual mode (no light).
Pump speed switch	The product is divided into three gears. When running, the gear is indicated by the rotating speed of the light bar. The faster the rotating speed is, the higher the gear is.
Antifreeze protection	When the water temperature of the pipeline is lower than 5°C for 30s, the electric pump will operate until the water temperature meets 10°C. If the water temperature can't meet 10°C, a buzzer will sound to give an alarm.

Commissioning

Commissioning method

- Mode switch: press and hold the  icon 2 second or above for mode switch
- Speed switch: press the  icon briefly for speed switching.

Product installation dimension drawing:



Troubleshooting

Fault	Main cause	Troubleshooting
The recirculating pump does not operate	Power failure	Check power adapter and circuit connection
	Enter protection logic	Power on again after cutting off the power for 10 seconds
	Temperature sensor failure	If the red light blinks, remove the circulation pump and sent it back to the manufacturer for repair.
The electric pump stops before the target temperature	Check valve is blocked or inlet and outlet installed reversely	Check whether the check valve is blocked or installed
	No loop is formed in the circulation pipeline	Check whether there are any valves that are not open
Abnormal noise appears	There are sundries in the flow passage of the electric	Remove the pump body and remove sundries
	Electric pump flow setting is too large	Switch to low gear operation or turn down the outlet valve appropriately
	There is a lot of air at the electric pump	Drain some hot water and tighten the water inlet pipe
	The inlet valve is not open	Open the inlet valve

Main Technical Parameters

Model	Rated voltage	Max. current	Max. lift (foot)	Input power /w	Max. flow (GPM)	Pipe size (inch)	Lift range (foot)
HIP24-12A	DC-24	2.5A	39.3	55	6.6	3/4 NPT	0-39.3