

The Wait is Over Hot Water in an Instant



➤ Hot Water Recirculation Basics

What are you waiting for?

Convenience and conservation are here now. You know what it's like to run the tap and wait for the shower to heat up before stepping in. Waiting for hot water is inconvenient and it wastes time and money. With a hot water recirculation system, the comfort of hot water in an instant and the elimination of water waste are a turn of the knob away.

What is Hot Water Recirculation?

Hot water recirculation means a continuous flow of hot water in the hot water supply line of your home. Without a “recirc” system, unused hot water in the line cools and must be evacuated before hot water from your hot water heater can reach the desired faucet. As a result, gallons of water are wasted – and so is your time.

How Hot Water Recirculation Works

New Construction – Return Line

During construction of a new home, a dedicated return line is installed between the end of the hot water supply line and the water heater. A circulator pump is installed at the point where the return line connects to the hot water tank. The circulator pushes heated water from the tank through the supply line and back through the return line.

Retrofit – By-pass

This system uses the cold water supply line as the “return-line” to the water heater. A circulator pump is used to create a pressure differential that allows the cold and cool water in the hot water supply line to by-pass (at low volume) into the cold supply line through a patented thermostatically controlled valve that is mounted under the sink furthest from the water heater.



Many home owners wait up to 60-seconds or more for hot water to their faucet or shower...
With Grundfos The Wait is Over!

➤ Home Owner Benefits of Hot Water Recirculation

Convenience and Comfort

Home owners today are constantly seeking improvements to their lifestyle. Dishwashers, garbage disposals, microwave ovens, electric garage door openers – all once considered optional home features are now standard. No wait hot water is destined to become another one of these standard features. Home builders and plumbing contractors are making HWR a feature that not only adds value to the home, but delivers the comfort and convenience of instant hot water that should be expected. Imagine turning on a shower and getting hot water immediately. Why wait while cold water is going down the drain?



Savings and Payback

How many stop to think what happens to the 2-3 gallons that run down the drain during the wait? Those gallons of water are wasted, and in an average household that takes four showers per day, that can add up to thousands of gallons per year. Multiplied by a subdivision of 300 homes, a community can have millions of gallons of water go down the drain into the sewer system every, single year. Hot water recirculation means hot water in an instant without unnecessary waste. Payback will result from the reduction of water usage, and water waste.



Helping the Community and Environment

Fresh water is a precious natural resource that is slowly being depleted. In many parts of the world, stringent water conservation is already a part of everyday life. Even in the U.S., rising population and arid climates in some Western states have resulted in higher costs and stronger focus on water conservation. Hot water recirculation is a cost-effective method of controlling any additional waste of water.



➤ Hot Water Recirculation Solutions



Comfort System – Retrofit

Why has hot water recirculation been virtually impossible for existing homes?

Traditional hot water recirculation is difficult, if not practically impossible to install in existing homes --- especially homes with finished basements. Companies have responded with clunky under sink units that are cumbersome to install and difficult to find electrical power under bathroom sinks.

New Strategy for Existing Homes

Grundfos innovation has developed a solution specifically for the existing home market. The Grundfos Comfort System provides a unique and cost effective solution for your customers that will make them happy and earn you more profits.

Features and Benefits

- No return line required.
- Installs in less than one hour.
- No electricity needed under the sink.
- Built-in timer & line cord.
- Uses less energy than a 25-watt light bulb.
- Can save up to 16,000 gallons of water per year, per household.

Electrical Connection

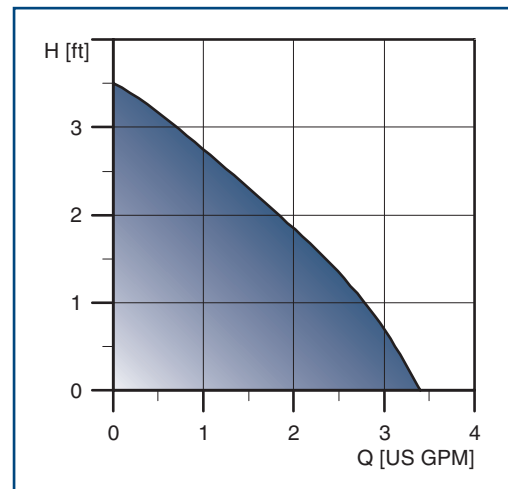
Pump is fitted with 10 foot cord and 115V plug.

Timer

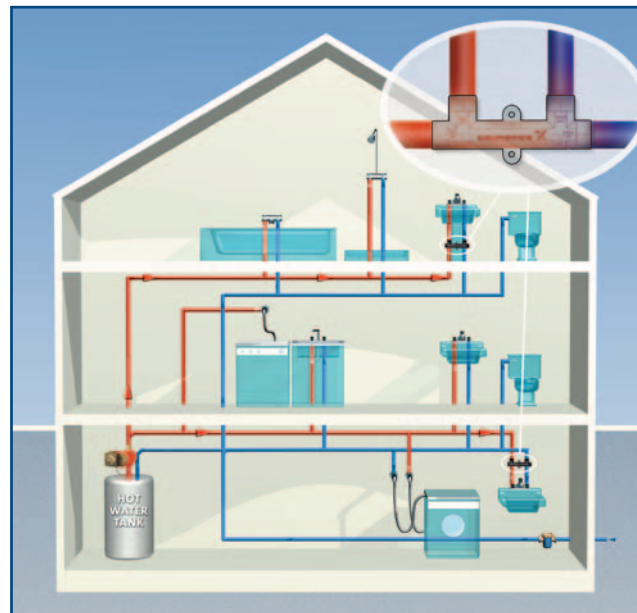
24 hr, 3 position, 15 minute intervals.

Grundfos Comfort System (UP 15-10 SU7P TLC)
Part# 595916 - includes pump with one valve & 2 flex hoses. ANSI/NSF61 and IAPMO listed

Performance Curve



Installation Diagram



Hot Water Recirculation Solutions



UP 10-16 – New Home

Why have many chosen not to install hot water recirculation into homes at the time of construction?

For those unfamiliar with the connection of a timer, aquastat, isolation valve and check valve in a traditional hot water recirculation system the task can appear daunting. After installing a return line in a new home some contractors have battled a bundle of components necessary to complete the job.

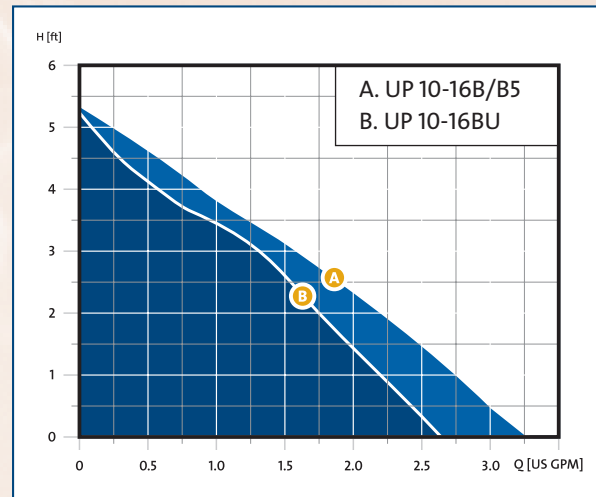
Strategy for New Home Construction

Grundfos innovation offers the only traditional recirculation solution that provides all of the answers in one package. The UP10-16BU ATLC makes a hot water recirculation installation a snap. You pull the dedicated return line, the circulator does the rest!

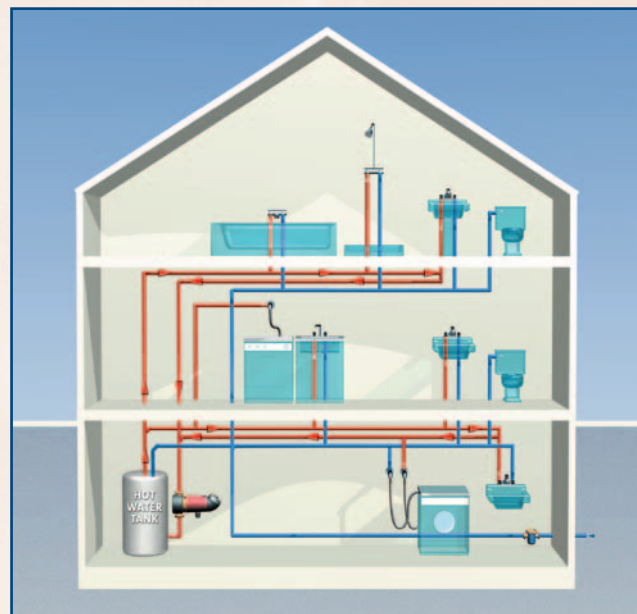
Features and Benefits

- Quick and easy installation with no additional components required.
- Built in timer & line cord.
- Aquastat control ensures optimum operation.
- Housing includes check valve to eliminate back flow.
- Integral isolation valve for ease of installation and service.
- Can save up to 16,000 gallons of water per year, per household.

Performance Curve



Installation Diagram



Model	Material Number	1/2" Sweat	1/2" F NPT	1 1/4" Union	Line Cord	Timer	Aquastat	Check Valve	Isolation Valve
UP10-16B5 LC	96433894	•			•				
UP10-16B5 TLC	96433895	•			•	•			
UP10-16B5 ATLC	96433896	•			•	•	•		
UP10-16BN5 LC	96433897		•		•				
UP10-16BN5 TLC	96433898		•		•	•			
UP10-16BN5 ATLC	96433899		•		•	•	•		
UP10-16BU ATLC	96433902			•	•	•	•	•	•

Hot Water Recirculation Solutions

UP Series – New Home

Custom HWR Solutions

Grundfos has developed several circulator pump models to meet the needs of custom domestic hot water recirculation systems.

Features and benefits

- Bronze and stainless steel models are available to resist the corrosive effects of fresh water.
- Timer models conserve energy since they can be set for desired operating times during the day.
- Line cord models provide convenience to the installer because no pre-wire of the pump is required.
- Models are available with built-in check valves to prevent back flow.
- Aquastats can be incorporated into the circulator for additional savings. The circulator will operate only when the temperature of the water is below the set point.



Models are available with the following configurations:

- Bronze housings with 1/2" and 3/4" sweat (B5 and B7).
- Stainless steel housings with union threaded connections (SU).
- Stainless steel with flange connections (SF).
- Integrated check valve inside the union discharge on a sweat pump housing (BUC5 and BUC7).
- Built-in 6 ft. , 115 volt ac line cord with a NEMA 3-prong male plug (LC).
- Built-in line cord and 24-hour programmable timer (TLC).

Model	Material Number	Pipe Connection				Features				
		1/2" Sweat	3/4" Sweat	1 1/4" GF 125 Union	GF 15-26 Flange	Bronze	Stainless Steel	Check Valve	Line Cord	Timer
UP 15-18B5	59896114	•				•				
UP 15-10B5/TLC	59896232	•				•			•	•
UP 15-10BUC5/TLC	59896238	•				•		•	•	•
UP 15-10BUC7/TLC	59896240		•			•		•	•	•
UP 15-18SU	59896127			•			•			
UP 15-18SU/TLC	59896232			•			•		•	•
UP 15-42SF	59896171				•		•			
UPS 14-42 SU	59896246			•			•			

*For more UP Series options, please refer to the UP Series Product Guide.

➤ Choose the Proper Pump for Your Application

There are two basic types of HWR systems installed today into homes. The dedicated re-circulating line, which requires an additional line for the hot water to return to the water heater, is most common in new home construction. The other is a retrofit solution, which uses a pump at your water heater along with the patented under sink valve beneath the sink furthest away from the pump. Each system is becoming more popular due to the population's increasing interest in saving water and adding convenience to their lives.

New Home Construction

This system requires a dedicated return-line to be installed from the end of the hot water supply line back to the water heater. A circulator pump is used to circulate water through the main hot water line and the return-line back to the water heater to keep hot water in the main line. A timer, aquastat, or both may be used to control the operation of the pump. The Grundfos UP 10-16's, as well as the UP Bronze and Stainless model circulators are common in this application.



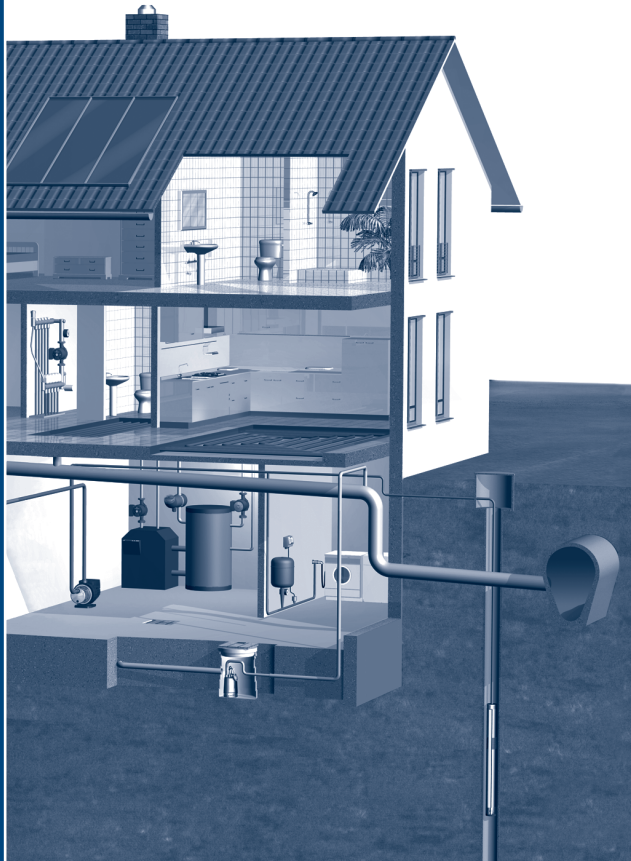
Retrofit Solution

The Grundfos Comfort System is a pump and valve combination that delivers you hot water in an instant to any faucet or bath in your home. The Comfort System uses a pump at your water heater along with the patented under sink valve beneath the sink furthest away from the pump. This patented combination creates a pressure differential that allows the cold and cool water in the hot water supply line to “by-pass” (at low volume) into the cold supply line through a thermostatically controlled valve that is mounted under the sink furthest from the water heater.

This combination works together to keep the water in your hot water line at temperature to provide “no-wait” hot water throughout your home. The timer on the pump makes it more efficient during downtime, like nights or mid-day. It's quiet, maintenance-free, and keeps your water at a comfortable temperature.



Pumps for all domestic applications



SUPERBRUTE (UPS15-58FC)
Closed system circulator pumps



SmartFlo™ SQE
Constant pressure system



CR 1s, 1, 3, 5
Multistage centrifugal pumps



KP and AP
Sump and utility pumps



MS Motors 4" & 6"
Submersible motors



MQ
Self-priming multistage pump



Grundfos is the flexible and innovative choice

Grundfos has been developing pumps for domestic use for more than 40 years. Throughout our long history our focus has always been innovative solutions for heating, water supply and wastewater applications.

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