

# Ultraflo Automated Plumbing System



## New Redesigned Plumbing System Easy to Operate and Saves Energy and Water

Current electronic technology enables automation to be applied to most systems in the home today, including the plumbing system. Conventional plumbing typically features dual 1/2" lines to feed hot and cold water to each of several points of use throughout a home - the kitchen, lavatory, and tub/shower. The user must manipulate such systems to obtain desired temperature and flow rate. Typically, water is run down the drain until the desired temperature is reached. This practice wastes the water sitting in the lines and loses the energy used to previously heat the water.

The Ultraflo automated plumbing system is a single-line electronic plumbing system that allows the user control over the water flow rate and temperature. With the aid of a grant from the Department of Energy's Inventions and Innovation Program, the Ultraflo System was redesigned and tested. The major redesign was to add touchpad control of temperature and flow rate at each point of use in the home.

Ultraflo is a water management system that uses a centralized solenoid valve unit, 12-volt electrical current, and switch consoles at each point of use. Hot and cold lines supply water to the central valve unit, which then delivers water on push-button demand to each end-use location via single 1/4" lines. Each console is customized to the water needs at that particular point of use. Preset temperatures and flow rates are activated by pushing the appropriate button on the console. The user can make subsequent changes in the settings by making slight adjustments at the central valve unit. Key to Ultraflo's water and energy savings is the single, small-diameter line extending from the central valve unit to each end-use location. These lines not only serve as flow restrictors but also retain less water between uses, so less water must be wasted waiting for a desired temperature.

## Overview

- ◆ Commercialized by Ultraflo Corporation
- ◆ 100 units sold

## Applications

Home plumbing systems

## Capabilities

Regulates water flow and temperature using a solid-state automatic touch control panel.

## Benefits

- ◆ Reduces energy and water consumption.
- ◆ Is easy to maintain and operate.
- ◆ Provides increased safety compared with conventional faucet systems by eliminating scalding.



*Ultraflow Touchpad Control Panel*