

GOT HOT WATER?

Do you routinely have to wait for hot water in the shower, or while washing dishes? If you answered yes, you are not alone. Sluggish hot water delivery is a problem that plagues homeowners and builders alike.

Waiting for hot water is not only an inconvenience, it also wastes valuable energy and resources. In America, a typical single-family home wastes about 10 gallons of water a day — and that adds up to \$11 billion per year in heating and waste-water treatment down the drain.

Despite their frustration, most homeowners shrug their shoulders at this problem, but not Gary Klein. In his job as an energy specialist with the California Energy Commission, Klein learned of a plumbing system that delivers hot water without wasting nearly as much water. In fact, he helped refine the system so that now as little as one cup of water is wasted while waiting for the hot water to arrive.

“People want the service of hot water and its byproducts: clean clothes, personal hygiene, clean dishes and relaxation,” says Klein. “And, they want it now!”

Klein is a strong advocate of The Metlund® Hot Water D'MAND® System, developed and marketed by Larry Acker, President of Advanced Conservation Technology, Inc. Metlund Systems. The system uses a circulation pump that supplies hot water on demand through a loop of copper plumbing tube situated no more than 10 feet away from any fixture where hot water is used.

The key to this system is to keep the volume of water in the branch lines as small as possible, which eliminates standing water that accumulates (and quickly cools) in the pipes when the hot water isn't running.

By making the branch lines short, the



A shower without hot water is no fun — outfitting your plumbing with a new circulating pump guarantees hot water on demand.

waste and wait for hot water is diminished. In addition, all of the hot water lines, loops and branches included, are insulated. This keeps hot water from the water heater hot until it reaches the tap.

Although it's not unusual for plumbers to install circulation pumps to improve home hot-water circulation, this system is unique in that the pump runs only when hot water is needed. This eliminates the wasted energy used by other systems, whose pumps run continuously.

The Metlund pump is a small energy-efficient unit installed close to the home's water heater. It's activated on-demand by the homeowner using a switch or motion-sensing device located near each faucet. The pump quickly pushes heated water through the main circulation loop, where it stays hot for up to an hour.

Available in configurations for both new and existing homes, the system costs around \$500 to install and reduces water waste by up to 95%, cutting operational costs to a bare minimum. To find out more about the benefits of copper plumbing go to <http://www.copper.org/applications/plumbing/homepage.html>. **Cu**

