## FIX IT UP!

Bruce Turner

## Getting in Hot Water May Be a Tankless Job

The last time we got together, we talked about water heaters – the necessity for flushing them periodically, for making sure they're insulated properly, for making them earthquake-secure. And not to be abusive of traditional water heaters, but they are expensive to operate and can also rust, leak and even explode.

So it's not surprising that a growing number of Americans have reached the same conclusion that millions of European and Japanese homeowners reached years ago – that there's a better way to go than having a big tank of hot water sitting in your home, sucking up your energy dollars with a continual heating process.

The solution is the tankless water heating system. It's basically hot water on demand – either a single boiler or a series of boilers, strategically positioned in place of your existing water heater.

Here's how it works. The boilers, which are about two feet high by two feet wide and maybe eight inches deep, continually have water flowing in. When you turn on your hot water tap, a valve kicks in, the boiler fires up and almost instantly heats the water as it flows through. How many boilers you need will depend on the size of your house and your usage patterns – how often you have one person showering, one person washing dishes and one person running a load of laundry all at the same time.

The benefits are tremendous. The system delivers instant hot water while using far less energy than a tank-style water heater, because the water is being heated only at the moment you need it rather than 24/7. The tankless system takes up very little space and doesn't require earthquake strapping. You don't have any of the maintenance and safety issues we talked about before. And you never, ever run out of hot water.

There's a downside, of course. A good tankless system can cost a couple of thousand dollars, plus installation. And while you'll make that back on energy savings, it'll take a while.

So if going tankless doesn't suit your budget – or you just don't feel like replacing a perfectly good water heater right now – there's another good way to reduce the time you spend waiting for the shower to get hot.

A recirculating pump is a device that pushes hot water in a loop from your water heater and delivers it to the source that is demanding it, so it's waiting for you when you turn the faucet. The benefit is obvious – you spend a lot less time holding your hand under the shower head, waiting for the hot stuff to arrive while gallons of expensive water flow uselessly down the drain. And the recirculating pump draws very low voltage, so it doesn't dent your energy budget.

A recirculating pump should always be on a timer, so it automatically operates during peak usage times. If you leave the pump on 24/7 and the hot water is circulating continuously, it creates electrolysis which eventually damages your copper pipes. Ten years from now they'll spring leaks, and you'll have to replace all of your copper supply lines. Putting the pump on a timer protects the pipes.

Neither a tankless water heating system or a recirculating pump is an installation job for even the best do-it-yourselfer. Every home has different piping systems and different requirements, and

you'll need a pro for this kind of work. But at least now you know there are some very cool alternatives for getting yourself into hot water.

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