

# TECHNICAL BULLETIN

## BULLETIN 12

### HEAT TRAPS

<b>SYMPTOMS</b>	"Ticking", "clicking", or "tapping" noises are caused by fluctuations in pressure in the piping system (toilet flushing, use of faucet, etc.).
<b>CAUSE</b>	Heat traps are installed on some residential water heaters to comply with the many utility incentive programs, and certain new construction or replacement product requirements in place throughout the country. Devices such as impulse sprinklers and water pumps can cause the pulsating. The noise is sometimes conducted through piping and framing of the house annoying the occupants.
<b>THE FIX</b>	Since there is no simple way to correct pulsation of the water supply, removal of the heat traps is sometimes the only practical alternative. The heat traps may be removed from the heater without affecting the safe operation of the heater.
<b>EFFECTS</b>	<p>The removal of the heat traps will cause a small reduction in the overall efficiency of the water heater. These reductions are as follows:</p> <ul style="list-style-type: none"> <li>• Electric - the overall efficiency of the heater will be reduced by two hundredths of a point or less. For example, a heater with a 0.91 EF may be reduced to a 0.89 EF. The net impact on the operating cost of the heater is about \$4.50 per year assuming a cost of \$0.04 per kwh for electricity.</li> <li>• Gas - the overall efficiency of the heater will be reduced by one hundredth of a point or less. For example, a heater with a 0.61 EF may be reduced to a 0.60 EF. The net impact on the operating cost of the heater is about \$2.00 per year assuming a cost of \$0.62 per therm for natural gas</li> </ul>