

# TECHNICAL BULLETIN

## BULLETIN 65

### Lime Build-up In Copper Tube Units

<b>Symptoms</b>	Noisy heater, Excessive vibration, Increase in outlet temperature, Cutting out on limit control or operating high limit.
<b>Cause</b>	Hard Water, Undersized or inoperable pump, Improper temperature rise through coil/heat exchanger
<b>Effect</b>	Temperature rise through coil/heat exchanger is too high, Water flow below recommended minimum, Obstruction in a passage of the Heat Exchanger or coil.
<b>Solution</b>	To keep this situation from happening you must maintain the proper temperature rise through the coil/heat exchanger of your heater. Insure that the pump is properly sized for your system. Use of a hard water pump in hard water areas. Water is considered hard if grains measure above 15 per gallon.
<b>Notes</b>	HW unit must maintain a temperature rise between 30-50 F degrees. DW-DB unit must maintain a temperature rise between 20-50 F degrees. GW-GB units must maintain a temperature rise between 20-40 F degrees. LW-LB units must maintain a strict 20 F degree temperature rise. A failure to maintain the proper temperature rise per manufacturer can cause excessive lime build-up and will void manufacturers warranty. If the temperature rise between the water inlet and outlet of the heater increases 5 degrees more than what it was when the hater was installed (clean), then deliming the heater is recommended.