



### **What is HWAT?**

HWAT is a temperature maintenance cable used in a domestic hot water system in lieu of a recirc system. The domestic water can be maintained from 105-140 degrees.

### **What kind of cable?**

HWAT is a self regulating heating cable. It is made by the company that developed the self regulating technology in the late 1970's. A self regulating cable consists of two bus16 AWG nickel plated copper bus wires with a semi-conductive material between the two wires. Electricity (either 208 or 220) flows from one bus wire to the other through the core material. The core is made of a modified polyolefin that is loaded with carbon allowing for numerous pathways of electricity. As the cable heats, it expands microscopically, breaking some of the pathways. As it cools, it contracts and those pathways are reconnected. It does this expansion and contraction the whole length of the cable allowing the cable to be crossed over itself and not burn out. The cable "senses" the temperature around it and responds accordingly. Since it is a parallel circuit it can be cut to length in the field.

### **What does it do?**

The heating cable is placed on the supply piping, under the insulation. The cable is controlled by an ECO controller which allows the user to change maintenance temperature, if desired. It allows for variances in ambient temperature. With the ECO controller the system heat output can be set back during non use periods. There is an alarm relay to signal power, temperature or communication problems. There are nine predefined programs that can be customized by the owner.

The cable will respond to the pipe temperature and increase or decrease its output as needed.

### **Why use HWAT?**

HWAT is used in lieu of a recirc system to save installation as well as operating costs. With the increasing cost of copper, by eliminating the return lines, recirc pump and especially the headach of balancing the system, the owner saves up front as well as a continued savings