

EXPANDED HWAT-ECO-GF ELECTRONIC CONTROLLER CAPABILITIES

The nVent RAYCHEM HWAT-ECO-GF electronic controller has multiple capabilities that help make the nVent RAYCHEM Hot Water Temperature Maintenance System (HWAT) a superior alternative to recirculation systems. This section expands upon some of these capabilities that were introduced in HWAT Design Guide (H57510), including the heat-up cycle and subsequent cool down, Building Management System (BMS) interface, predefined programs, and the water heater sensor function. For additional information, refer to the HWAT-ECO-GF Installation and Operation Manual (H57340).

HEAT-UP CYCLE AND COOL DOWN

The HWAT-ECO-GF controller includes a heat-up cycle function that allows the HWAT system to increase the water temperature of a hot water system that is not in use. During the heat-up cycle, the HWAT-ECO-GF controller continuously powers the heating cable for the selected timeframe. Using the heat-up graphs below, program the HWAT-ECO-GF controller for the amount of time required to reach the desired temperature. To allow sufficient time for the pipes to cool before hot water is used, refer to the cool-down chart to determine the amount of time required in Off mode after the heat-up cycle is complete and program the HWAT-ECO-GF controller accordingly.

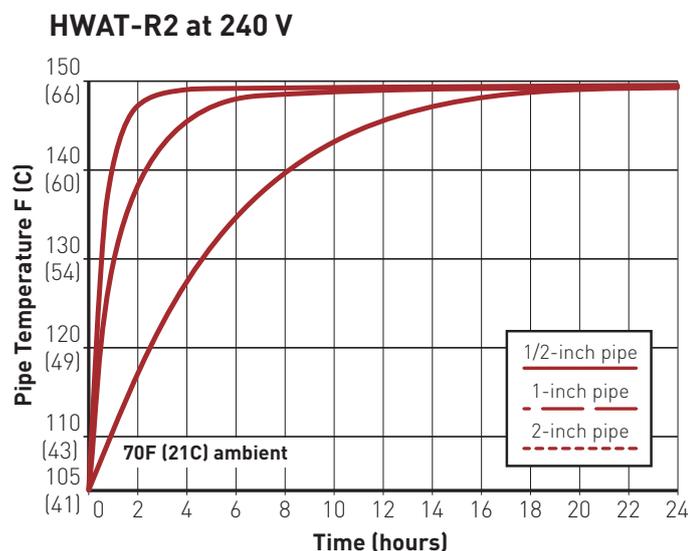
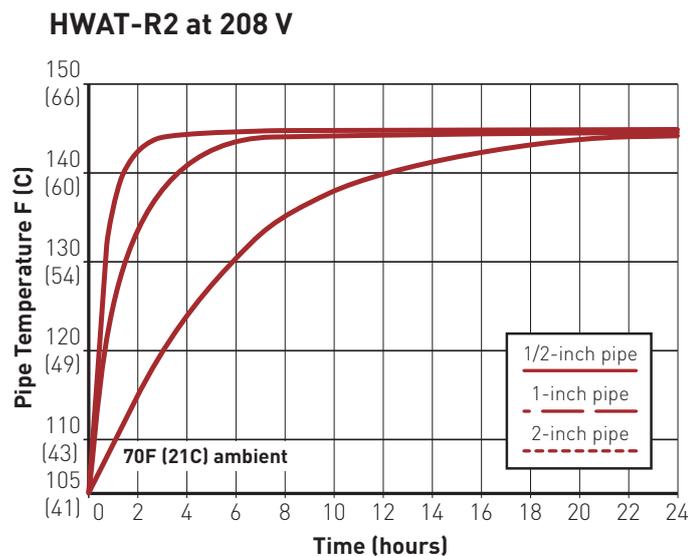


Fig. 1 Heat-up cycle graphs

SCALD PROTECTION



HWAT systems present an increased risk of scalding due to the high water temperature. Pay special attention to the scald warning to the left.

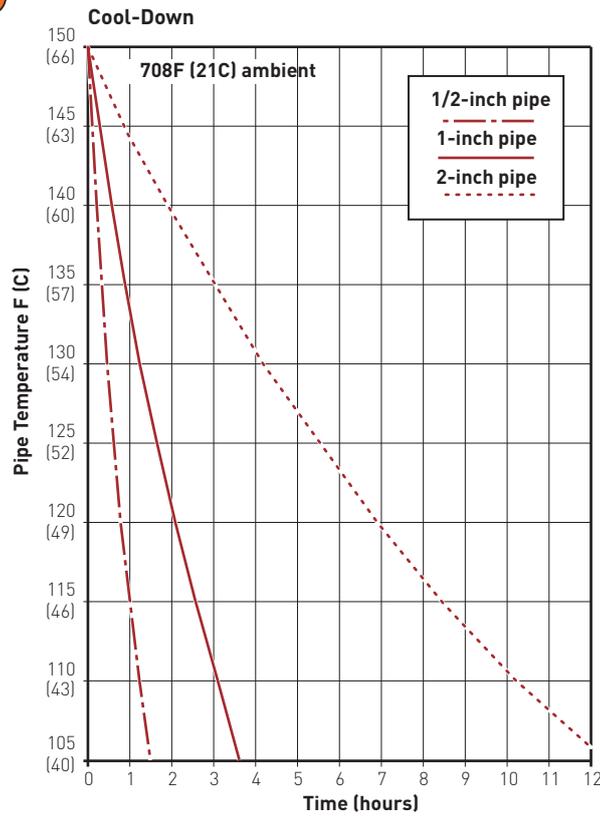


Fig. 2 HWAT cool-down graph

PREDEFINED PROGRAMS

The HWAT-ECO-GF controller has seven predefined programs that can be customized by the user. These programs include time intervals for Maintain, Economy, Heat-Up and Off modes. The economy setting is selected for low water usage periods where a lower maintain temperature is acceptable. The Off setting is selected for cool down after a heat-up cycle or for high usage periods where hot water is flowing from the water heater to the point of use with minimal delay thus not requiring energy from the HWAT system.

- = Heat-up cycle
- = Maintain temperature
- = Economy temperature
- = Heating off

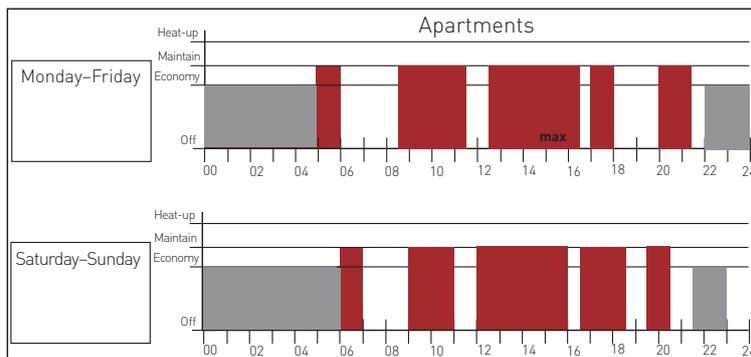


Fig. 4 Predefined program example

WATER HEATER SENSOR FUNCTION

The HWAT-ECO-GF controller ensures that the maintain temperature does not exceed a user defined high temperature limit set point. When the water heater sensor option is activated, the HWAT-ECO-GF controller monitors the temperature of the water being supplied to the system. As shown in Fig. 5, the water heater sensor can be installed on the outlet of the water heater or after the mixing valve, depending on the configuration of your system.

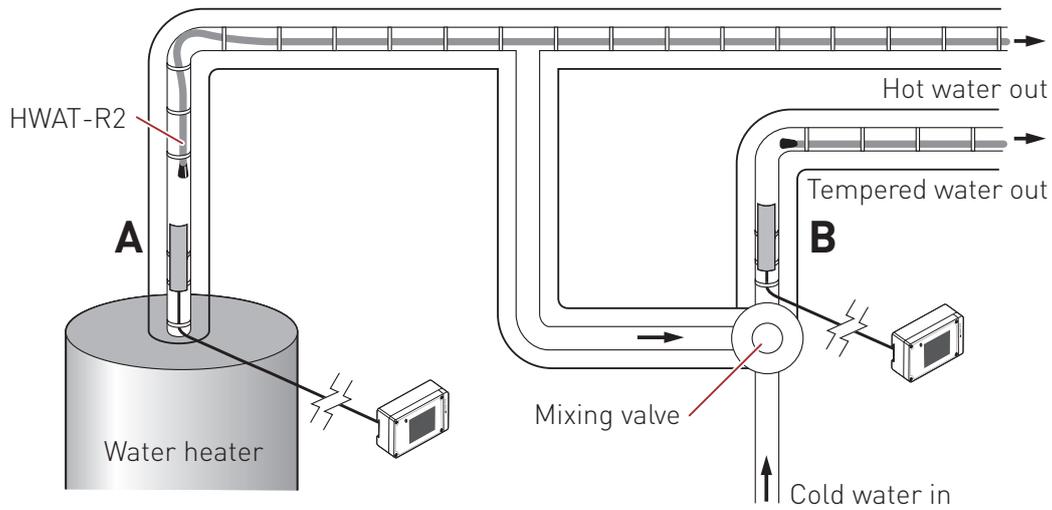


Fig. 5 Water heater sensor function example

North America

Tel +1.800.545.6258

Fax +1.800.527.5703

thermal.info@nvent.com



nVent.com

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER