

Self-regulating cables for hot water temperature maintenance

Raychem® HWAT® self-regulating heating cables are installed on hot water supply pipes underneath standard pipe insulation. The heating cable adjusts its power output to compensate for variations in water temperature and ambient temperature. The heating cable replaces supply-pipe heat losses at the point where the heat loss occurs, thereby providing continuous, energy-efficient, hot water temperature maintenance and eliminating the need for a recirculation system.

Simplified design

Single-pipe HWAT systems eliminate the need for designing complex recirculation systems, with their pumps, piping net-

works, and complicated flow balancing. Special cases, such as retrofits and multiple pressure zones, are simple to design.

Low installed cost

Installation of the HWAT system is simple. The heating cable can be cut to length, spliced, tee-branched, and terminated at the job site, reducing installation costs. Fewer plumbing components are needed; recirculation piping, pumps, and balancing valves are all eliminated.

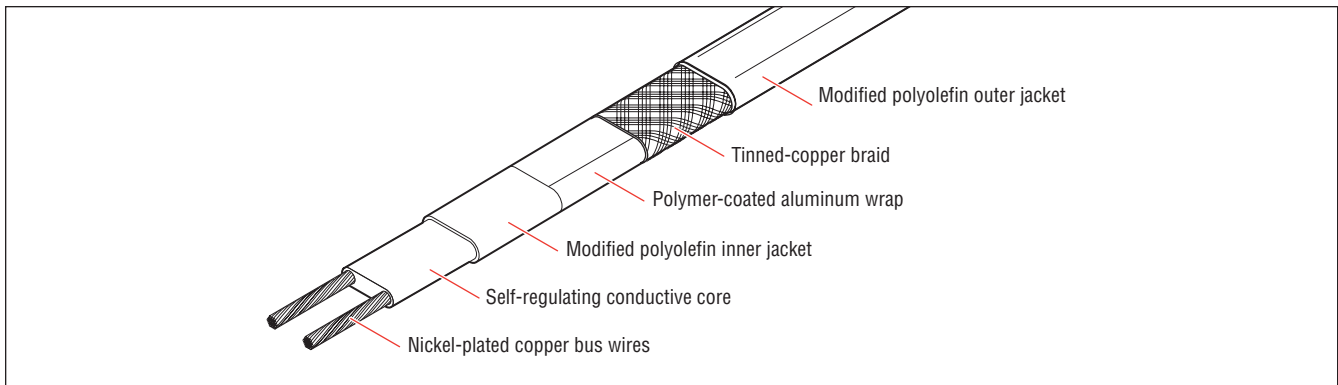
Low operating cost

The HWAT system continuously maintains hot water temperature at every point along the supply pipe. Unlike conventional recirculation systems, HWAT systems do not

require the overheating of supply water to allow for cooling. The HWAT system reduces the energy requirements of typical hot water systems with reduced heat loss from supply piping, no heat loss from recirculation piping, and no pump to run.

HWAT-ECO

The HWAT-ECO electronic controller is designed for operation with HWAT-Y2 and HWAT-R2 heating cables. The HWAT-ECO provides flexible temperature control, energy savings, heat-up cycle function, BMS interface, and nine predefined programs that can be customized by the user.



Specifications

Jacket	Modified polyolefin
Braid	Tinned copper
Bus wires	16 AWG nickel-plated copper
Supply voltage	208 V/240 V
Minimum bend radius	0.5 in (12 mm)

Product Characteristics (Nominal)

Catalog number	HWAT-Y2	HWAT-R2
Jacket color	Yellow	Red
Maintain temperature range*	105°F (40°C) to 125°F (50°C)	105°F (40°C) to 140°F (60°C)
Weight	200 lbs/1000 ft (0.31 kg/m)	230 lbs/1000 ft (0.35 kg/m)
Dimensions		
Width	0.67 in (17 mm)	0.72 in (18 mm)
Thickness	0.38 in (10 mm)	0.38 in (10 mm)

* When designed in accordance with the *HWAT System Product Selection and Design Guide*

Design and Installation

For proper design and installation, use the Design section of the *HWAT System Product Selection and Design Guide* (H57538) and the *HWAT System Installation and Operations Manual* (H57548).

Maximum Circuit Length ft (m)

	HWAT-Y2	HWAT-R2
Breaker size	@208 V	@208V
30 amp	800 (240)	500 (150)
20 amp	500 (150)	330 (100)
15 amp	350 (105)	250 (75)

Ground-Fault Protection

To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with Tyco Thermal Controls requirements and national electrical codes, 30 mA ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.

Approvals



Pipe Heating Cable

HWAT heating cables are UL Listed, CSA Certified, and FM Approved when used with the appropriate agency-approved Raychem components and accessories