APPLICATION REQUIREMENTS

THE REQUIREMENTS BELOW WILL HELP YOU VERIFY THAT HWAT-P1 IS APPROPRIATE FOR THE APPLICATION.

Water Temperature 125°F–135°F (52°C–57°C) at 70°F (21°C) ambient.
   Note: Pipe temperatures will vary depending upon the ambient temperature.
Applications Residential domestic hot water temperature maintenance.
Pipe Material Copper, CPVC and rigid PEX (1/2 in–2 in)
Ambient Temperature (near pipe location) 65°F–75°F (18°C–24°C)
Voltage 120 V
Ground Fault Requirements To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Inher, agency certifications, and national electrical codes, ground fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.

Application Restrictions

The HWAT system as outlined in this brochure is not intended for applications where:

• Heating cable is run through an unheated area, such as a crawl space or uninsulated attic.
• Where a building code requires a maximum temperature less than 125°F (52°C).

If your application conditions are other than those listed above, contact your nVent representative or call (800) 545-6258.

DESIGN TABLE

SELECT REQUIRED COMPONENTS AND DEVELOP BILL OF MATERIALS.
VERIFY NUMBER OF CIRCUITS REQUIRED FROM STEP A AFTER ALLOWANCES ARE ADDED.

Component Usage Heating Cable Allowance* Number of end seals required
HWAT-P1 Heating Cable Length of hot water pipe to be traced plus allowances – –
BayClic PC Power Connection One per circuit 2 ft (0.6 m) 1
BayClic-T Tee Connection As required for pipe branches 2 ft (0.6 m) 2
BayClic-S Splice Connection As required 2 ft (0.6 m) –
HWT-P Power Connection One per circuit 2 ft (0.6 m) 1
HWT-HST Splice/Tee As required Splice: 3 ft (0.9 m) 2
Tee: 4 ft (1.2 m) 2
BayClic-E End Seal As required 0.3 ft (0.1 m) –
GT-66 Glass Tape Used to attach heating cable every 2 ft. One roll covers approximately 50 ft (15 m) of pipe – –
AT-180 Aluminum Tape 1.5 ft (0.5 m) of heating cable – –
Electric Traced Label Placed on alternating sides of insulation. One label for every 10 ft (3 m) of pipe – –

*For ease of connection kit installation, allow extra heating cable as shown.
The simplest way to provide instant hot water

### HWAT-P1 System Advantages
- Instant hot water
- Lower installed cost than recirculation or point-of-use systems

#### System Connection Kits and Accessories

The HWAT-P1 system consists of heating cable and connection kits. Two types of connection kits are available for use with the HWAT-P1 heating cable. The HWAT-P1 RayClic connection system is a simple, fast and reliable set of connection kits including power, tee, splice and end seal connections. The HWAT-P1 RayClic connection system is designed to provide a low cost power and low profile splice and tee connections. Accessories include glass tape and Electric Traced labels. HWAT heating cable-P1 is cut to length in the field and tees may be used to accommodate pipe branches.

Plumbers and electricians can install RAYCHEM innovative RayClic connections in a fraction of the time required for terminal block or crimp-type connections—thus dramatically lowering the total installed cost of the system.

For a complete list of connection kits and accessories consult the RayClic Data Sheet (H55234).

#### Installation

- SUPPLY PROPER INSULATION MATERIAL AND THICKNESS.
- Use only fiberglass or closed cell foam insulation.
- For pipe sizes of 1/2-in and smaller use insulation sized for 1/2-in larger pipe.
- Where cable is installed on plastic hot water pipes, attach with AT-180 aluminum tape as shown in the HWAT Installation and Operation Manual (H57548).
- For system installation, testing, and commissioning, the HWAT Installation and Operation Manual (H57548) must be used. Although HWAT-P1 is not specifically mentioned in all steps of system testing, operation, and installation outlined in sections 1-5, if you need assistance or a copy of the operation manual, contact nVent representative or call (800) 545-6258.

#### Approvals

The HWAT-P1 system is UL Listed, CSA Certified, and FM Approved in nonhazardous locations.