

# HWAT-STANDARD SYSTEM

## SPECIFICATION GUIDELINE SINGLE PIPE HOT WATER SYSTEM



- The system shall be complete with cold components and have a 10 year product warranty.
  - The self-regulating heating cables shall be specifically designed for this application, comply with HSE HS (G) 70 and be capable of demonstrating a lifetime in excess of 25 years.
  - The self-regulating heating cables shall have modified polyolefin (radiation cross-linked, to ensure long life expectancy) electrical insulation, laminated aluminium foil layer, tinned copper braid and modified polyolefin over jacket with metre marks for ease of installation.
  - The appropriate nVent RAYCHEM HWAT heating cable shall be selected to provide a maintained temperature of 50-55°C, variations in ambient conditions shall be taken into consideration. Interconnection and termination shall be with cold applied, insulation displacement connectors and gel type end seals, UV resistant, IP 68, 65°C rated, with audible and visual installation confirmation, as manufactured by nVent and known as RayClic.
- The nVent RAYCHEM HWAT cables shall be installed 'straight traced', within their maximum circuit lengths, tested and commissioned strictly in accordance with the manufacturer's instructions and preferably by a specialist installer named by the supplier.
  - The commissioning report must be registered to gain benefit from the 10 year product warranty. The system should be installed to within 1000 mm of each outlet or blending valve, or as close as is reasonably practicable, and in accordance with hot water maintenance regulations. Insulation selection and thickness shall be in strict accordance with the HWAT design guide, take into account variations in ambient temperature, be applied without delay after the heating cable installation, affixed with suitable warning signs, placed less than 3 m apart, on alternate sides of the pipe and visible from all sections.
  - Each circuit shall be protected by an MCB (BS EN 60898 type C or D or equivalent) and RCD (30 mA sensitivity, tripping within 100ms). Isolators shall be provided for each heat tracing circuit.
  - All connections between the electrical supply and HWAT circuits shall be installed by an approved electrical contractor.

### IN ENGINEERING NOTES COLUMN

- The domestic hot water supply has been designed as a single pipe system. No return pipes shall be fitted.
- All hot water service pipes shall be fitted with an energy efficient, self-regulating heating cable system, RAYCHEM HWAT, as manufactured by nVent, to compensate for heat losses and maintain a temperature of 50-55°C.
- The cables shall be installed to within 1000 mm of each outlet or blending valve, or as close to the draw-off point as is reasonably practicable whilst observing the requirements of relevant hot water maintenance regulations.
- The termination of self-regulating heating cables shall be with insulation displacement type connectors and gel type end seals, RayClic, as manufactured by nVent.
- The appropriate HWAT cable type shall be selected to ensure correct temperatures are maintained for all anticipated ambient temperatures.
- The HWAT cables shall be installed 'straight traced', insulated, tested and commissioned strictly in accordance with the HWAT design guide and preferably by a nVent acknowledged specialist installer.
- Insulation selection and thickness shall be in strict accordance with the HWAT design guide.

**United Kingdom**

Tel 0800 969 013  
Fax 0800 968 624  
salesthermalUK@nvent.com

**Ireland**

Tel 1800 654 241  
Fax 1800 654 240  
salesIE@nvent.com

**South East Asia**

Tel +65 67685800  
Fax +65 67322263

**Australia**

Tel +61 2 97920250  
Fax +61 2 97745931

**INDIA - NOIDA**

Tel +91 120 464 9500  
Fax +91 120 464 9548  
NTMinfome@nvent.com

**INDIA - MUMBAI**

Tel +91 22 6775 8800/01  
Fax +91 22 2556 1491  
NTMinfome@nvent.com

**UAE**

Tel +971 4 378 1700  
Fax +971 4 378 1777  
NTMinfome@nvent.com



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