

HWAT-ADVANCED SYSTEM

SPECIFICATION GUIDELINE SINGLE PIPE HOT WATER SYSTEM



- 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, nVent RAYCHEM HWAT-R to compensate the pipe heat loss and to maintain the pipe temperature in the range 50-65°C.
 - The system shall be complete with accessories, energy efficient controls and a 10 year product warranty.
 - The self-regulating heating cables shall be specifically designed for this application, comply with HSE HS (G) 70 and capable of demonstrating a minimum lifetime 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 meter marks for easy monitoring of circuit length during installation.
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- Interconnection and termination shall be done with cold applied connection modules 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.
 - Control of HWAT circuits shall be via an energy saving, programmable controller to provide adjustable maintain temperatures in the range 50-65°C, HWAT ECO, as manufactured by nVent. The controller shall have a boiler temperature sensor and alarm system, 8-day programmable temperature v time function, integrated clock, pre-set specific building programs, thermal shock program, 5" coloured touch screen user interface, password protection, optical and acoustic alarm fault messages.
 - The HWAT cables shall be installed 'straight traced', within their maximum circuit lengths, tested and commissioned strictly in accordance with the manufacturer's instructions, preferably specified by nVent. The commissioning report must be registered to gain benefit from the 10 year product warranty. The hot water pipe has to be traced as closely as possible to the tap or blending valve in accordance with hot water maintenance regulations.
 - Insulation selection and thickness shall be in strict accordance with the HWAT design guide, taking into account variations in ambient temperature be applied without delay after the heating cable installation, affixed with suitable warning signs, placed less than 5 m apart, on alternate sides of the pipe and visible from all sections.
 - All HWAT circuit shall be controlled and monitored via a multi circuit control panel, type SBS-XX-HV-ECO manufactured by nVent equipped with MCB (BS EN 60898 type C) and RCD 30 mA/100ms. All connections between the electrical power supply, control panel 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 the energy efficient, selfregulating heating cables, HWAT R, as manufactured by nVent to maintain an adjustable temperature in the range 50-65°C.
- Termination of the self-regulating heating cables shall be with insulation displacement type connectors and gel type end seals, Rayclac, as manufactured by nVent.
- The circuits shall be controlled via an energy saving, programmable controller, HWAT ECO, as manufactured by nVent, to provide adjustable temperatures in the range 50-65°C.
- The HWAT circuit shall be controlled and monitored via the multi circuit control panel, SBS-xx-HV-ECO-10, by nVent, integrated with circuit protection.
- The HWAT cables shall be installed 'straight traced', insulated, tested and commissioned strictly in accordance with the HWAT design guide and preferably by a specialist installer named by nVent.
- 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.
- Insulation selection and thickness shall be in strict accordance with the HWAT design guide.

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