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Check List for Specifier of Aquatherm PP-R – Constant Hot Potable Water Recirculation.

The Aquatherm Technical Catalogue NZ 10101 Edition: 01/2011) (“Technical Catalogue”) sets out all of the relevant considerations for the installation of Aquatherm PP-R pipe systems and should be read before specifying or installing any Aquatherm PP-R product. The Technical Catalogue sets out all the relevant considerations and appropriate parameters in which the Aquatherm PP-R Product is capable of operating and the procedures and requirements for its installation. For convenience only, Aquatherm provides the following 11 points to assist hydraulic consultants and installing plumbers in the design, specification and installation of any potable hot water recirculating PP-R pipe system. These 11 points are not a substitute for reading the Technical Catalogue in full and should only be read in conjunction with the Technical Catalogue.

1. Constant hot potable water temperatures not to exceed 70°C - see pages 11 and 14 (Potable Water) of the Technical Catalogue.
2. Velocity of hot water in pure PP-R hot water recirculation pipe systems should not exceed 2.0 m/sec. (see page 81 Technical Catalogue).
3. Care should be exercised in mixed PP-R / Copper hot potable water recirculation systems where temperatures / pressures may exceed 70°C (permissible working pressures – see page 14 Technical Catalogue) and where copper pipe velocities may exceed established international copper design practice. Installing plumbers should refer to the project’s hydraulic consultant. (see page 11 Technical Catalogue).
4. Upstream use of copper pipe in PP-R hot water recirculation systems where the parameters mentioned in point 3 above are exceeded should be avoided and are not recommended. (see page 11 Technical Catalogue).
5. Aquatherm does not recommend the application of constant hot water temperatures greater than 70°C and velocities that exceed established international copper design practice in potable hot water recirculating systems, (see page 11 Technical Catalogue). In the event such excessive parameters may be present prudent hydraulic practice requires the pure PPR hot water recirculation system to be quarantined by installing a heat exchanger with a stainless steel coil between the PP-R pipe system and any upstream copper in the plant room/manifold/HWS.

6. Proper expansion facilities, i.e. bending sides or expansion loops, to be installed. Expansion loops to be installed midpoint in every 40 metre straight run; (see page 62 - 65 Technical Catalogue)
7. Only Aquatherm clips are to be installed with Aquatherm pipe; (see page 55 - 57 Technical Catalogue)
8. Clipping distances to be determined at the constant maximum temperature (use $\Delta T = 70K$ fusiotherm faser composite pipe SDR7.4; see page 67 Technical Catalogue);
9. Only Aquatherm accredited and currently certificated plumbers are to install Aquatherm pipe and fittings;
10. Only Aquatherm approved, serviced and calibrated fusion tools are to be used in installing Aquatherm pipe and fittings;
11. Aquatherm pressure testing, including the bump (final) test, to be conducted at a pressure of 1500 kPa as per AS 3500.

fusiotherm[®] pipe system
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