Variocomp Floor Probe Install Guide

Installing Floor Probes

Central Heating New Zealand's approach to underfloor heating control involves managing both air and floor temperatures, while the air temperature is the main aspect used for the management of the heating the floor is maintained between minimum and maximum floor limits in the background. This strategy is designed to minimise temperature lag and overshoot, thereby enhancing occupant comfort and system efficiency. With all underfloor heating systems floor probes are recommended, and while Variocomp systems have less lag than other forms of underfloor heating the inclusion of floor probes with these systems is still strongly recommended.

Floor Probe Detailed Views

For Variocomp systems, the installation of the floor probe requires additional consideration, as it must be integrated within the panel system. Our underfloor layout drawings for Variocomp systems include detailed views illustrating our recommended floor probe installation methods (see Figure 1).
Two proposed installation methods are provided to guide installers and simplify the installation process, as shown below.

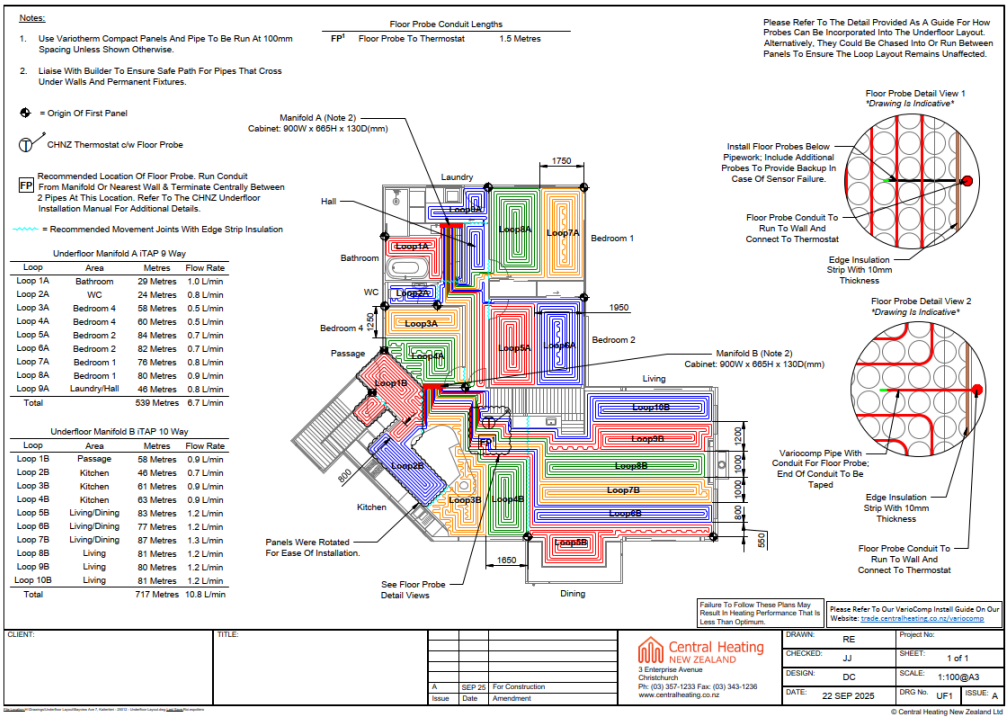

Figure 1: Underfloor Layout Example with Floor Probe Detail

Floor Probe Detail 1

This floor probe installation method routes the probe directly beneath the Variocomp pipes without the use of a conduit and must be completed before the filling compound is applied. Correct positioning is essential to avoid interference with the pipework while ensuring reliable thermal contact within the panel system, as illustrated in the recommended layout shown in Figure 2.

Once the filling compound is installed, the probes are permanently encapsulated and cannot be removed or replaced. To address this limitation and improve long-term system reliability, it is recommended that two to three probes are installed at each location to provide redundancy in the event of probe failure, as referenced in Figure 2.

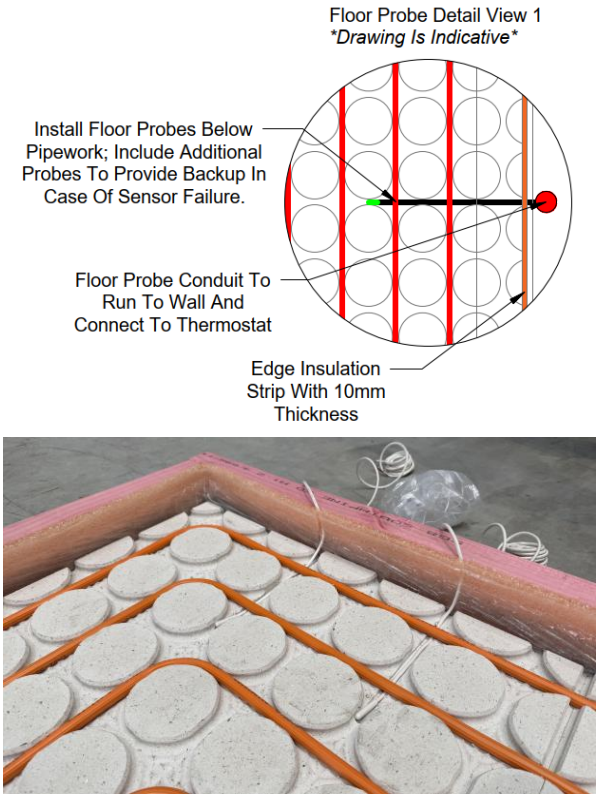

Figure 2: Floor Probe Detail View 1

Floor Probe Detail 2

Another proposed method involves locally adjusting the Variocomp pipe layout to allow for the installation of a conduit to house the floor probe. This approach enables the probe to be installed within a protective sleeve, providing clear access while maintaining effective temperature sensing, as shown in Figure 3.

By allowing the probe to be removed and replaced if required, this method reduces the need for multiple probe installations at a single location. However, it may result in a minor variation to the standard Variocomp pipe layout in the immediate probe area, which should be considered during design and installation (see Figure 3).

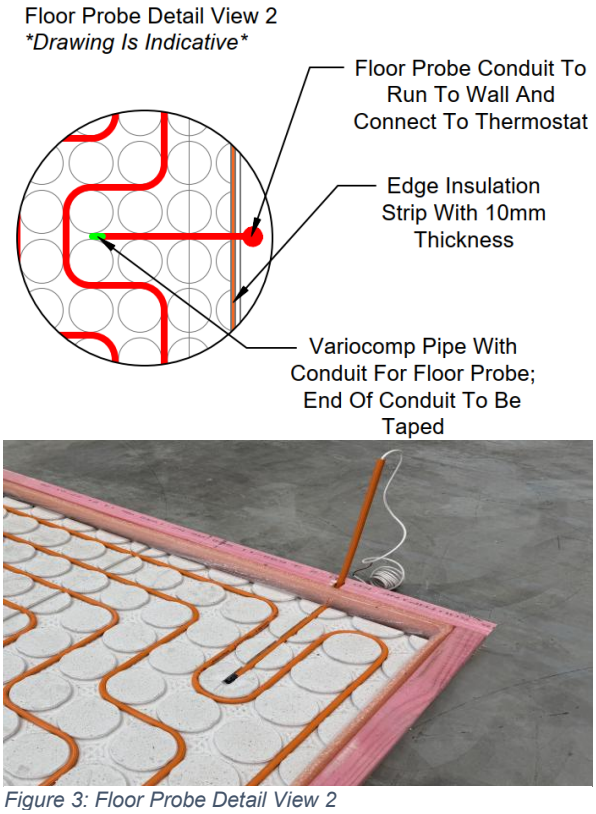

Figure 3: Floor Probe Detail View 2

Thermostat and floor probe locations are clearly identified on our underfloor layout drawings using standardized symbols to ensure they can be easily located during installation and commissioning. These symbols provide clear coordination between the heating layout, control points, and probe positions, reducing the risk of misplacement or clashes on site. A supporting table detailing conduit length is also included to assist with accurate installation planning and routing, as shown in Figure 3.

Floor Probe Conduit Lengths		
FP[1]	Floor Probe To Manifold A	3 Metres
FP[2]	Floor Probe To Thermostat	2 Metres

FP[1] Recommended Location
FP[2] Of Floor Probe.

T CHNZ Thermostat

Figure 4: Table and Symbols used in the underfloor layouts.