DEVI Under Tile Heating System - Specification.

This section relates to the supply and installation of **DEVI™** Heating Systems Ltd electric underfloor heating mats and controls for domestic, commercial, or industrial applications.

**1. DOCUMENTS.**

* 1. **Product Installation and Compliance Documentation.**

 Compliance with the following documents is required during the installation, commissioning and testing of installed Devi products:

 [NZBC G9](http://www.masterspec.co.nz/redirect.aspx?pl=251)/VM1 Electricity, 1.0 Electrical installations

 NZS 6110 Electrical installations – floor and ceiling heating systems

 AS/NZS3000 Electrical installation

 IEC60335-2-96 DEVImat™ under tile heat mats.

 IEC 60730-2-9 DEVIreg™ thermostat.

### **Manufacturers Documentation.**

 **DEVI™** Heating Systems product information, installation instructions and warranty documents are supplied with all products.

 Additional copies of these instructions are available from:

 Web: [www.devi.co.nz](http://www.devi.co.nz)

 Email: info@devi.co.nz

 Telephone: South Island 03 348 0070 or 0800 468 356

 North Island 09 415 7250 or 0800 927 635

* 1. **Warranty – Supplier/Manufacturer.**

 The manufacturer’s warranty is:

 **DEVI™** DEVImat™ heating mat 20 years

 **DEVI™** DEVIreg™ Programmable thermostats 5 years

 **DEVI™** DEVIreg™ Manual thermostats 2 years

 Warranties must be provided using the manufacturer/supplier standard forms as supplied. Warranties commence from the date of element installation.

 Work undertaken by each subtrade shall be covered by their own warranty.

### **2.** **RELATED WORKS.**

 Electrical specification.

 Tiling specification.

 Flooring specification.

**3. CONDITIONS.**

All work and materials must comply with **DEVI™** installation instructions.

### **4**. **QUALIFICATIONS.**

### 4.1 Installation must be undertaken by an electrical person, tiler or by a **DEVI™** approved installer.

4.2 Connection to electrical circuit to be carried out by registered electrical tradesperson.

###  Refer section 7.3 for livening.

**5.** **DEVI™ PRODUCTS AND DESIGN INFORMATION.**

5.1 Substitutions are not permitted to any **DEVI™** system, associated products, components, or accessories.

5.2 Single Conductor Underfloor Heat Mat.

 **DEVI™** DEVImat™ 150 DSVF, single conductor fully screened heating mat in ready-made lengths with a PVDF Outer sheath and a FEP conductor insulator. Mats are available from 0.5SQM to 10SQM. Multiple mats may be installed to one circuit for areas over 10SQM.

5.3Element size to be determined by measurements from drawings or as specified.

5.4 THERMOSTATS.

 DEVIreg™ 530 Thermostat, Manual, 15A with floor sensor.

 DEVIreg™ Touch (White) Thermostat, Programmable, 16A, air and/or Floor sensor.

 DEVIreg™ Touch (Black) Thermostat, Programmable, 16A, air and/or Floor sensor.

 DEVIreg™ Smart (White) Thermostat, WiFi Programmable, 16A, air and/or Floor sensor.

 DEVIreg™ Smart (Black) Thermostat, WiFi Programmable, 16A, air and/or Floor sensor.

 (Delete thermostat models that are not applicable then delete this line).

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## 6. EXECUTION.

### 6.1 **Confirm Layout.**

 Before commencing work confirm the proposed location of heating cables and controls.

### 6.2 **Co-ordinate Services.**

 Co-ordinate and co-operate with other sub-trades to avoid any conflict with the installation of the system.

6.3 **Preliminary Work.**

 Ensure any walls, floor penetrations (door stops) and floor mounted cabinetry are clearly marked out on the floor.

 Clean and prime the floor prior to the installation of the heating mat.

### 6.4 **Install DEVImat.**

 Install the **DEVImat™,** ensuring as much of the floor area is covered in each of the zones shown on the plan / **DEVI**™ schedule and in accordance to **DEVI™**  instructions.

 Recess both cold tail connections with the floor space.

### 6.5 **Install Thermostat Sensor.**

 Install thermostat sensors for each zone as per the **DEVI™** schedule. Install sensors within the supplied flex conduit tube. This will ensure they can be easily replaced.

 For timber cover flooring, sensors must be installed to ensure contact with wood cover.

### 6.6 **Tiling.**

 After installation of the DEVImat™ the floor tiler is to install tiles on a screed or tile directly over the mat using an approved adhesive. Refer to the appropriate tiling section for the supply and installation of the tiles.

### 6.7 **Cold Tail Connections.**

 Terminate all cold tails directly to the thermostat or in a flush box mounted not less than 300 mm above floor level.

6.8 **Thermostat Installation.**

 Install and connect all thermostats and controls as per the **DEVI™** schedule.

### **7.** **TEST PROCEDURES AND COMMISSIONING.**

7.1Refer AS/NZS3000 section 8 Verification.

7.2 Complete visual inspection. Test for earth continuity, conductor resistance and insulation resistance prior to installation, after installation of mats and before livening. On livening, complete polarity and load test with reference to mat specification.

7.3 An electrical registered person must complete the test result sheets and associated Certificate of Compliance and forward these to the property owner.

### **8.** **CONTROLS SETTINGS.**

8.1 Where programmable or intelligent thermostats are installed, the correct day and time must be programmed, and the thermostat left in power off state.

8.2 Manual thermostats to be left set to minimum in off mode.

8.3 Wood cover floors: refer flooring suppliers’ information for maximum temperature setting and all programable thermostats accordingly.

### **9.** CLEANING.

 Check site for safety and remove all surplus materials.