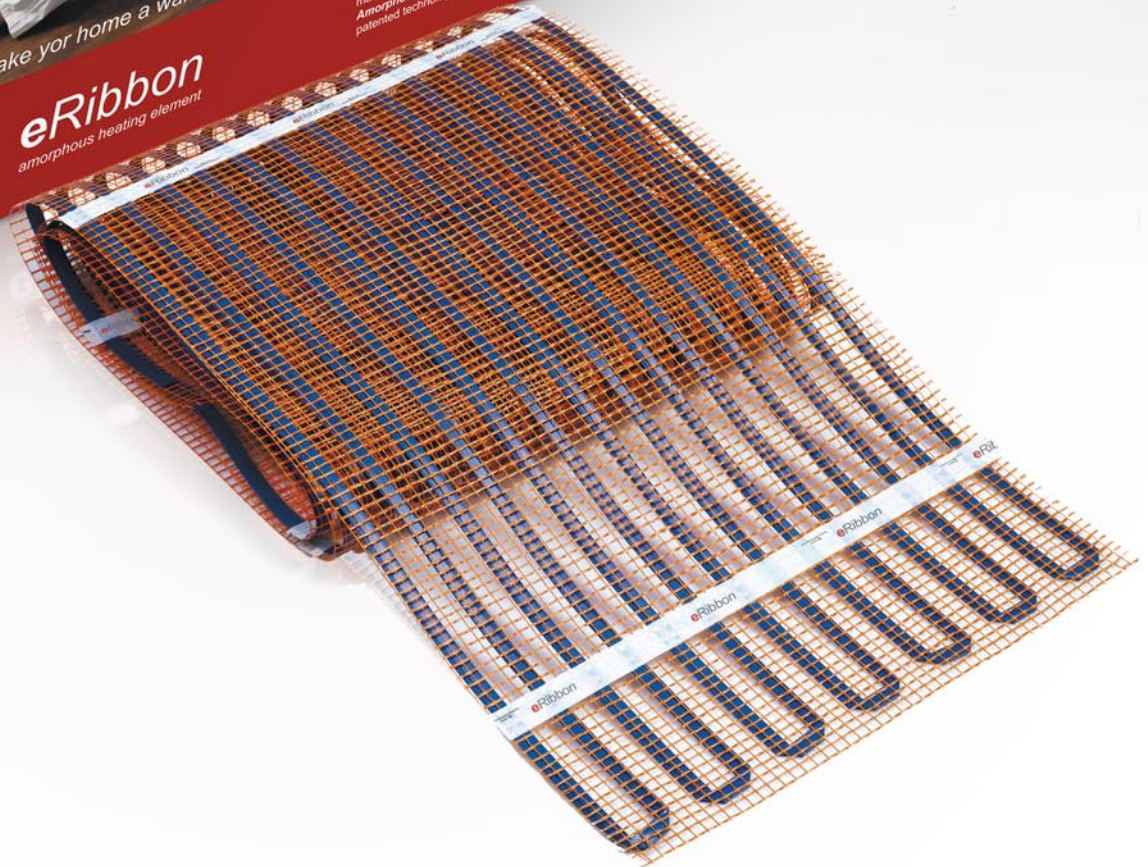




eRibbon Installation Manual



www.electricunderfloorheating.co.uk

Before you begin installing read through these instructions carefully and check that you have all the components required.

Introduction

Important notes, please read carefully before proceeding with installation

The eLine Brand

Congratulations on choosing your eRibbon underfloor heating product from the eLine range of under floor heating solutions.

The eLine range has been manufactured to exceed all relevant standards and expectations considering ease of installation and usability through the lifetime of the product.

The eRibbon Product

The eRibbon mats are constructed from flat amorphous metal ribbons covered by two layers of polyethylene electric insulation. The ribbons are evenly spaced on a mesh mat providing a simple and easy to install product.



Tools needed for installation

You will require the following items to install and test the floor warming systems.

- Tape measure, drawing pad and pencil
- Utility knife, scissors
- Cable strippers, screw driver
- Resistance tester (multimeter), insulation resistance tester

You will also need the appropriate tools and materials to install your finished floor surface; these will probably include products like double-sided tape, eFoam and various other tools and materials for your specific project.

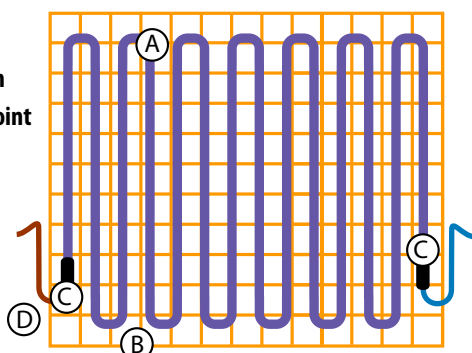
Contents of eRibbon system

- Heating mat
- Installation instructions
- Warranty

The following pages contain all the information you will need about the eRibbon. Please take the time to study this information thoroughly before you attempt to install this product.

Glossary of Terms

- A** – Heating element
- B** – Fibreglass backing mesh
- C** – Factory made cold tail joint
- D** – Cold tail power lead



Do's & Dont's

Do

Carefully read this instruction manual before starting your installation and follow the testing procedure as detailed on page 7. Throughout your installation:

- Ensure that the electric circuit that supplies electricity to the eRibbon heating system is equipped with a 30Ma residual current device (RCD)
- Connect all cold tail leads from the eRibbon heating mats in parallel at the low level junction box
- Ensure that the total current for all mats does not exceed more than 80% of the current rating of the MCB/ Fuse
- Use insulation under the mats to reduce costs and warm up time. Check with your installer to determine the R value of the sub-floor insulation layer

Don't

- Install mats under walls or partitions, or in areas under heavy cabinets, closets, or fixtures (toilets, sinks, tubs, etc.).
- Install mats within 3cm of any heat conductive building part, such as cold water pipes.
- Install mats within 5cm of one another, 10cm of any wall, or 15cm of a fireplace or hot water pipe.
- Connect any other electrical appliance on the same electric fused spur or RCD unit of the heating system.
- Install heating mats under wooden floor if the wooden floor is thicker than 18mm.
- Use carpet underlay with thermal resistance greater than 0.8 Tog.
- Install under carpet with thermal resistance greater than 2.0 Tog.
- Overlap heating mats.
- Fold or wrinkle eRibbon heating mats.
- Place heavy/sharp tools (or any other potentially damaging object) on top of the heating mats.
- Walk unnecessarily on the heating mats.
- Use cellulose insulation.
- Install mats when the room temperature is below -5°C (23°F).
- Install underfloor heating mats anywhere except inside buildings.

Electrical Requirements

Please follow these instructions carefully. If you require assistance prior to or during your installation please call our helpline on 08714 74 08 18

Electrical Requirements

Before installing the eRibbon you should make allowance for the electrical connections (see diagram below).

The eRibbon system requires a mains voltage 230/240V and must be connected in accordance with the current IEE regulations and building regulations part 'P' approved document.

For areas up to 22m² the eRibbon power connection can be provided through a 13A switched spur outlet/combined RCD spur outlet. For larger areas a dedicated circuit should be installed from the local consumer unit.

Confirm your thermostat is suitable to switch the appropriate electrical load e.g. 15A thermostat 230V is suitable to switch up to 22m² of eRibbon.

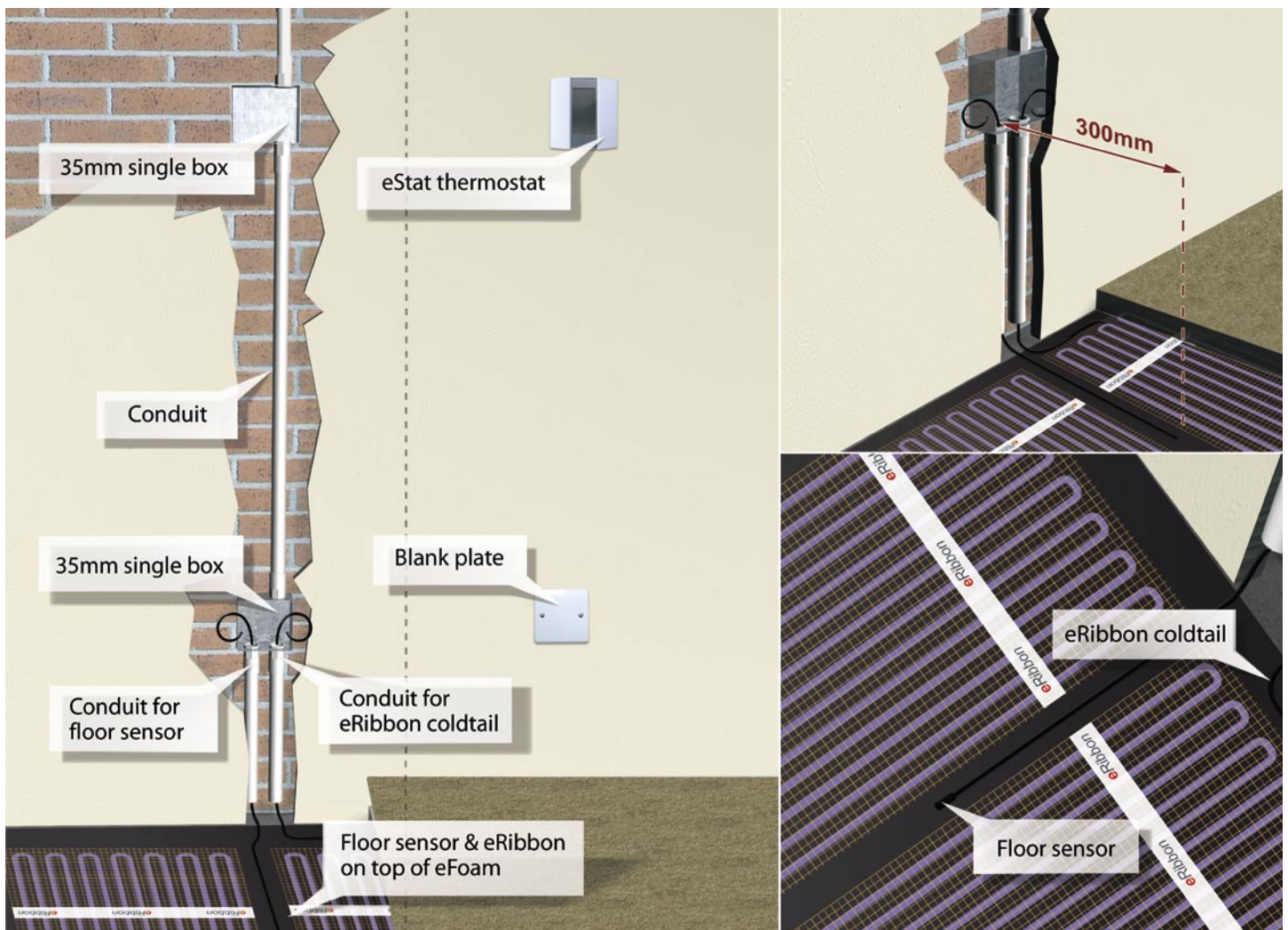
If you are required to switch greater electrical load than 15A a suitably sized thermostat or electrical contactor **MUST BE INSTALLED**. If in doubt please call our helpline on 08714 74 08 18.

It is a requirement that all eRibbon systems are protected by a 30ma RCD earth trip either at the consumer unit or by a combined RCD spur outlet.

When installing in a bathroom or other wet areas the thermostat must be located outside Zone 2 (0.6m from any wet appliance e.g. shower, sink etc) or outside of the wet area ideally on the opposite face of the wall.

Important. When designing your electrical installation you should always consult an electrician concerning your requirements.

eRibbon and Floor Sensor

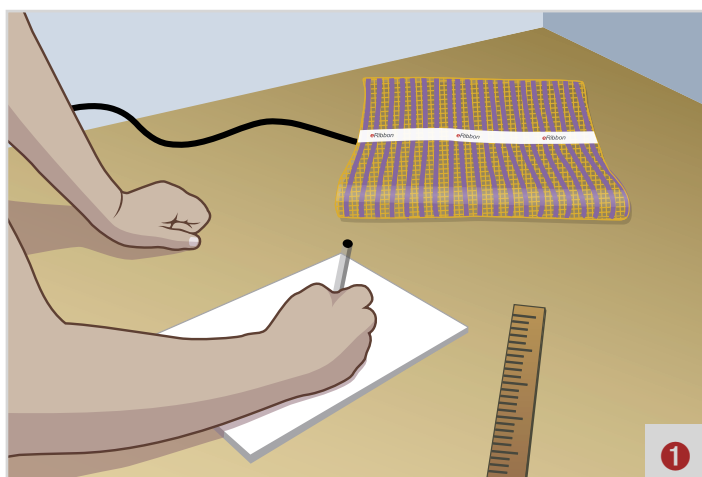


Installation Instructions

**Ensure your eRibbon is correctly sized before you unpack the product.
Call 08714 740818 with any questions.**

Step 1

Draw an installation plan showing the placement of the mats, floor sensor, and junction box or boxes. Ensure the eRibbon mats are not laid in areas where fixed appliances may be positioned. Decide a suitable position for the thermostat.



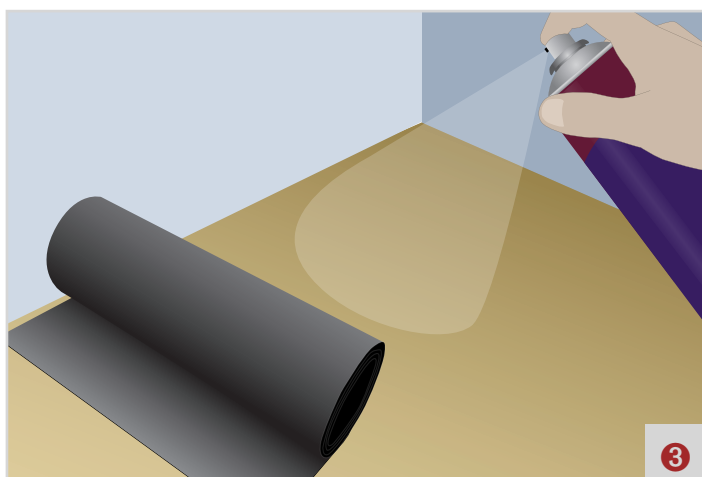
Step 2

The floor should now be prepared ready for the eFoam insulation. All loose particles should be removed and the floor thoroughly cleaned and treated with any proprietary sealants as normally required.



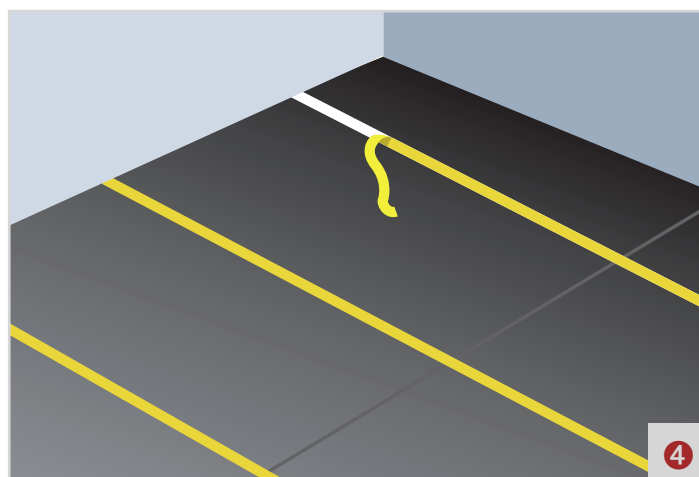
Step 3

Position and cut the efoam to fit your room size securing it with the spray adhesive and using the utility tape to cover all eFoam joints.



Step 4

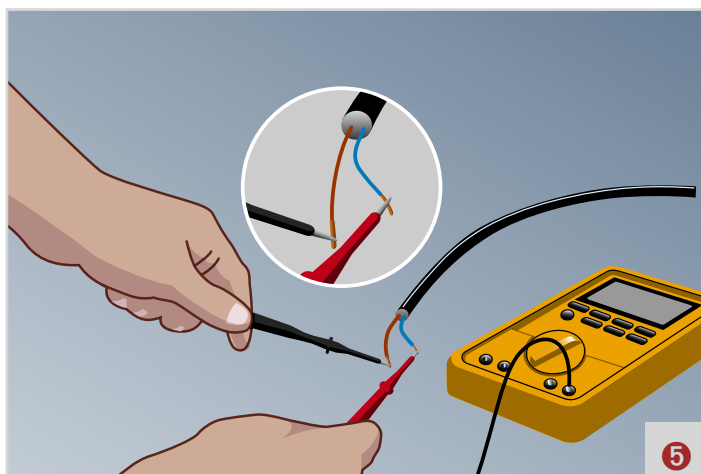
Position the double sided tape at regular intervals across the floor where the eRibbon mats are going to be laid.



Installation Instructions

Step 5

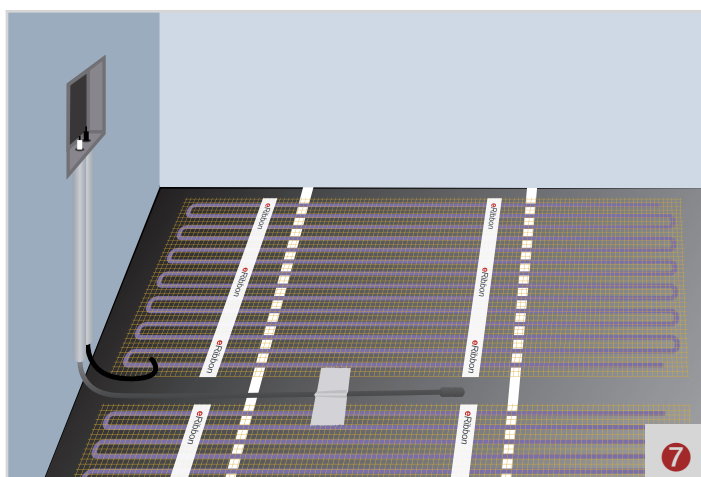
Perform the following tests: Insulation resistance test, a heating cable resistance test and a floor sensor resistance test. (see page 7) record your findings in the test & commission form enclosed in the box.



Step 7

Position the floor sensor thermostat probe directly below the electrical connection point.

The floor sensing probe should be installed in-between two heating ribbons and secured with the single sided adhesive tape (the floor sensor is used to measure the maximum temperature beneath the floor).



Note

After the finished floor covering has been laid perform the following tests:

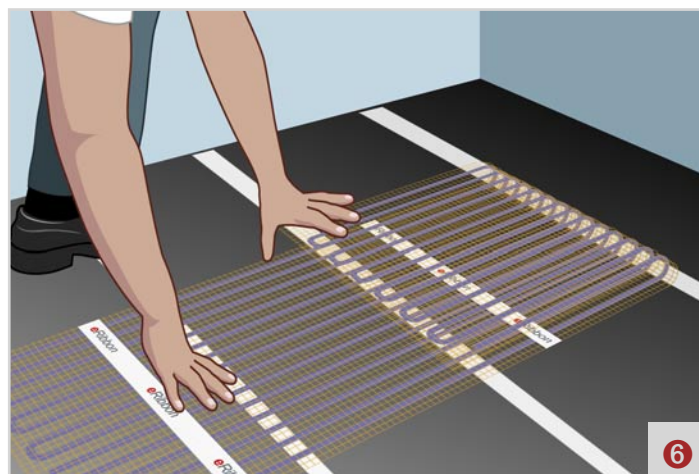
- Insulation resistance test
- Heating cable resistance test
- Floor sensor resistance test

Record your findings in the test & commission form enclosed in the box.

Step 6

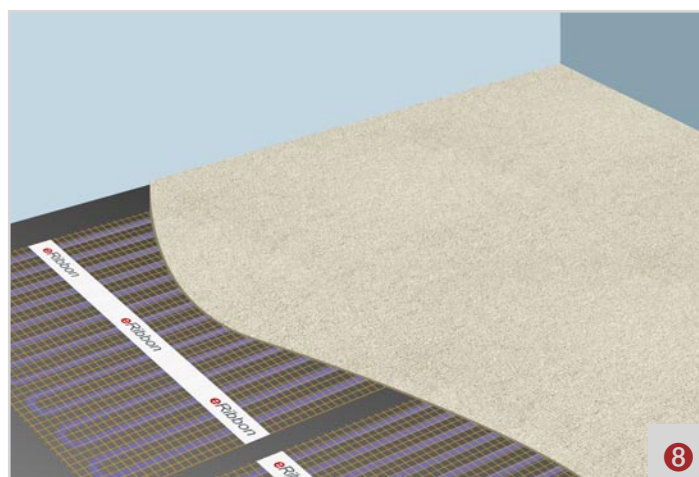
Unfold the eRibbon with the fibreglass net facing up, lay the eRibbons onto the eFoam insulation. Using the doublesided adhesive tape clearly fixed to the eFoam ensures the eRibbon is installed with no raised folds. Each pair of cold tails should be connected to a low level connection point.

Note Do not over lap the eRibbon mats



Step 8

With the eRibbon laid and secure the finished floor surface can now be laid. When using the Duralay Heatflow underlay install directly above the eRibbon



Register your warranty online at: www.electricunderfloorheating.co.uk/warranty

Mat Planning and Layout Instructions

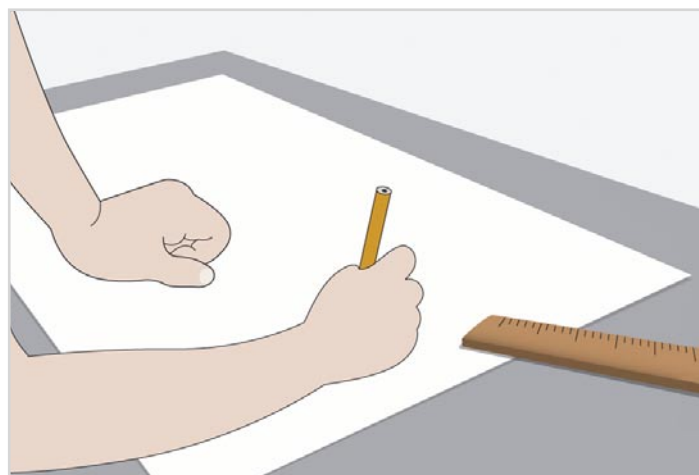
Planning your eRibbon

It is important when organising the layout of the mats that you accurately draw your room area as this will help save time and ensure a smooth installation.

The eRibbon heating mats should cover at least 65 – 80% of the floor area, the more coverage the less time needed to heat the area. The eRibbon mats have been designed with wide heating elements that are positioned closer together so that you can achieve comfortable temperatures more quickly providing you with a guaranteed even distribution of heat across your floor.

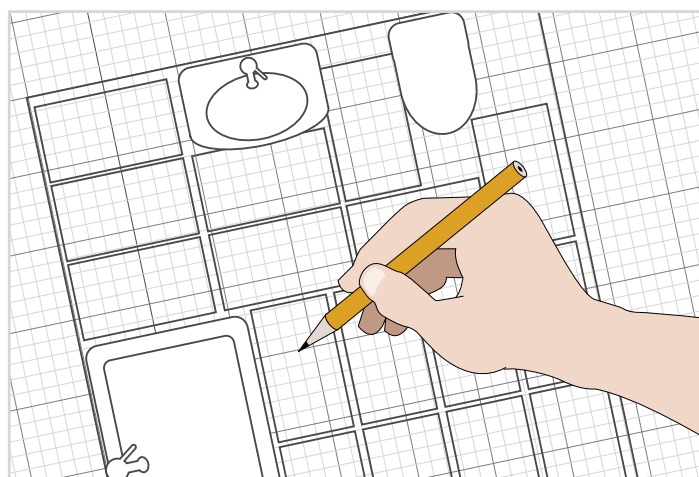
The eRibbon heating mats are available in several convenient sizes. Choose the combination of heating mats that best enables you to cover the recommended 65 – 80% of your room. Plan to use the larger heating mats as much as possible and the smaller mats only as gap fillers.

Please find below a list of the available mat sizes complete with the resistances for your reference whilst installing the eRibbon.

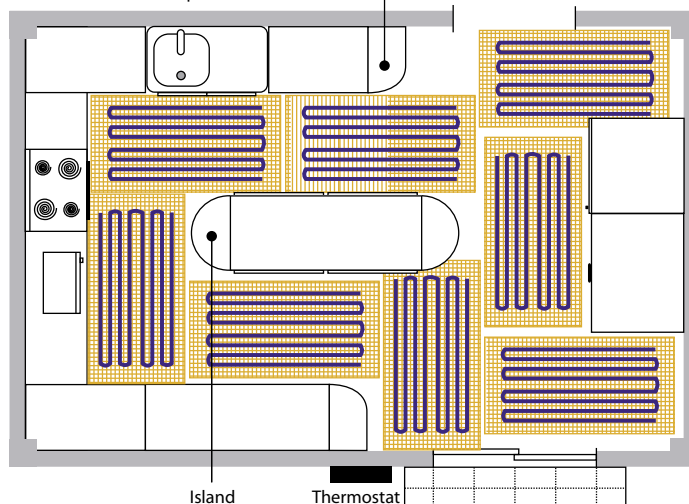


Product Specifications

Q/F	Part Code	Dimensions	Coverage	Resistance	W/m ²
1251	eRib1001	1m x 1m	1m ²	321-393	150
1251	eRib1015	1m x 1.5m	1.5m ²	207-241	225
1253	eRib1002	1m x 2m	2m ²	155-183	300
1254	eRib1025	1m x 2.5m	2.5m ²	131-153	375
1255	eRib1003	1m x 3m	3m ²	107-124	450
1256	eRib1035	1m x 3.5m	3.5m ²	100-115	525
1257	eRib5012	0.5m x 1.2m	0.5m ²	534-618	90
1258	eRib5015	0.5m x 1.5m	0.75m ²	445-516	113
1259	eRib5002	0.5m x 2m	1m ²	321-393	150
1260	eRib5025	0.5m x 2.5m	1.25m ²	253-309	187
1261	eRib5003	0.5m x 3m	1.5m ²	199-240	225
1262	eRib5035	0.5m x 3m	1.75m ²	187-224	262
1263	eRib5004	0.5m x 3.5m	2m ²	154-183	300
1264	eRib5045	0.5m x 4m	2.25m ²	146-172	337
1265	eRib5005	0.5m x 4.5m	2.5m ²	131-153	375
1266	eRib5055	0.5m x 5.5m	2.75m ²	130-151	412
1267	eRib5006	0.5m x 6m	3m ²	107-123	450



Kitchen furniture template marked onto floor



Testing & Commissioning

Floor Construction Examples

Warranty Validation

To validate your 15 year online warranty registration you must perform the insulation resistance test, the heating cable resistance test, and the sensor resistance test three times during the installation process.

1. Before you lay the eRibbon.
2. After you have laid your eRibbon and before you cover your eRibbon.
3. After your finished floor has been laid.

This information must then be recorded on your commissioning record form (enclosed within box).

Insulation Resistance Test

This test is performed to measure the insulation resistance between conductors and ensures the cable insulation is not damaged. A low resistance reading indicates a damaged cable and must be repaired or replaced.

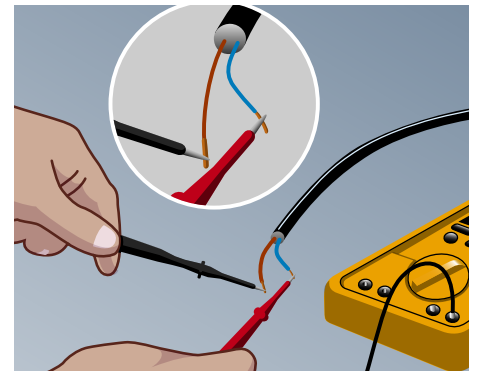
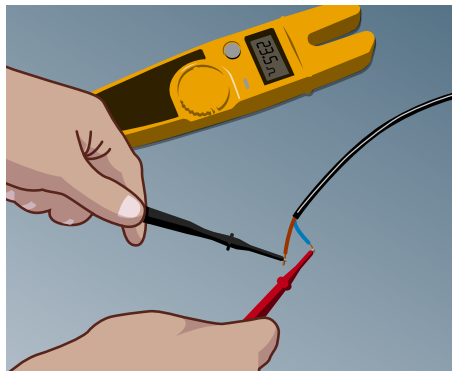
The insulation resistance tester should be connected between the main conductor off the cold tails and earth. The meter should record a high resistance value e.g. above 100 Meg ohms.

Heating Cable Resistance Test

The test is carried out to prove continuity of the heating element. A low resistance ohm meter should be used (ie multimeter on ohm setting), connect your meter onto the mains lead and confirm resistance value matches that quoted on your specification label on the eRibbon cold lead joint.

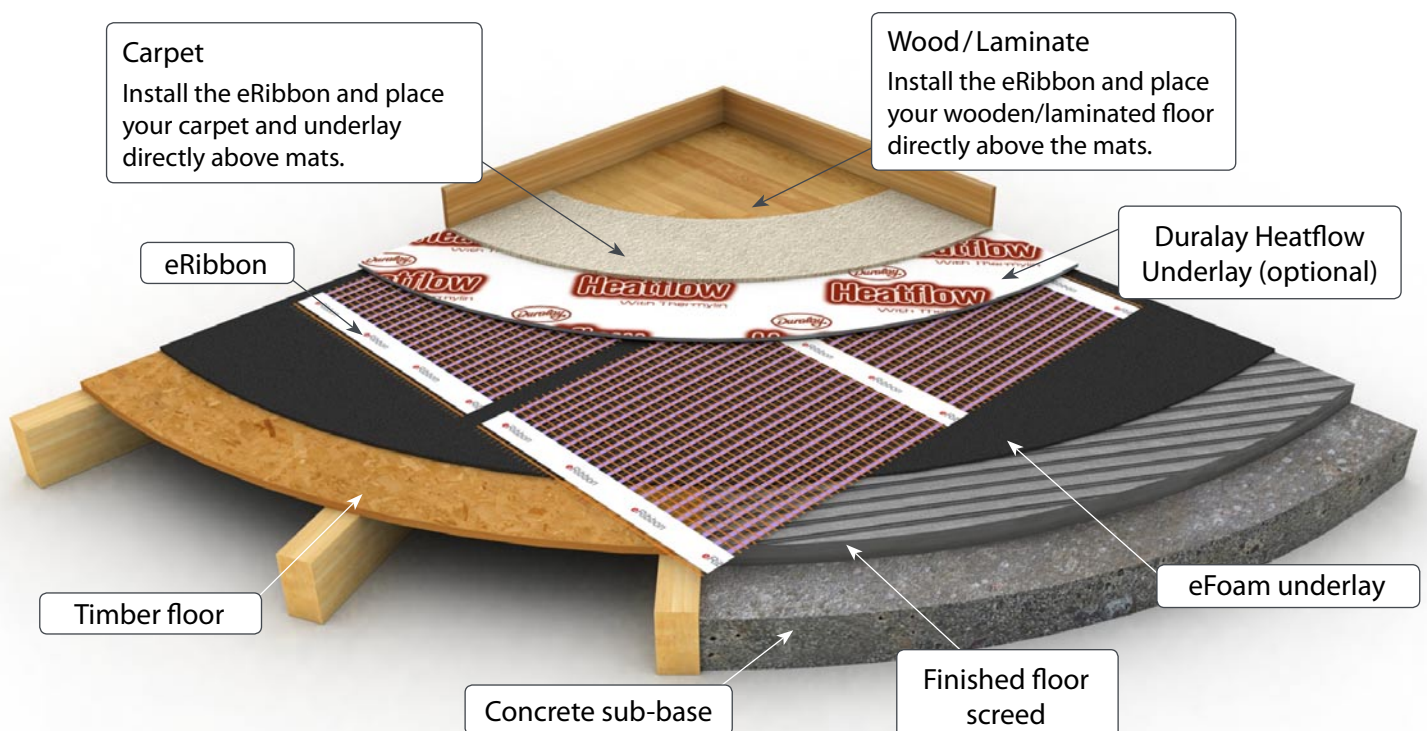
Floor Cable Resistance Test

See Heating Cable Resistance Test and repeat with floor sensor cable.



Floor Construction Examples

The eRibbon allows direct installation of timber laminate, parquet or carpet above the heating mats with no danger of damaging the colour, texture or coating of these delicate floor coverings.



Troubleshooting

Symptom	Probable Causes	Corrective action
Floor does not heat	No power at controller	Check Power supply
	MCB Tripped	Check the circuit is not overloaded or short circuited
	Thermostat not set correctly	Refer to thermostat Instructions
	eRibbon not correctly connected with thermostat	Refer to thermostat Instructions
	Floor temperature sensor not connected	Refer to thermostat Instructions
	Faulty sensor/thermostat	Contact the eLine Helpdesk 08714 74 08 18
	Heating element cut or damaged	Contact the eLine Helpdesk 08714 74 08 18
Floor warming all the time	Thermostat not set correctly	Refer to thermostat Instructions
	Floor temperature sensor not connected	Refer to thermostat Instructions
Floor not getting warm enough	Thermostat not set correctly	Refer to thermostat Instructions
	Floor sensor too close to heating element	Contact the eLine Helpdesk 08714 74 08 18

Contact the eLine Helpdesk with any questions on 08714 74 08 18

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eCentral

An easy to use touch screen panel which offers complete control over your entire heating system wirelessly from one central control – devilink™.



eStat

Provides total control and flexibility when using your underfloor heating system. With the options of both manual and fully programmable controls.



eDemist

An ultra thin self-adhesive heating pad that fits inconspicuously behind virtually any mirror keeping the mirror completely mist free.



eGuard Monitor

Monitors mats and cables for faults during installation.



Call 01473 27 66 80 to receive the latest  underfloor heating catalogue

eRibbon

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