



Floor Warming and Heating System

INSTALLATION GUIDE

CREATE A
HEALTHY AND
WARM LIVING SPACE





YOUR SAFETY IS IMPORTANT TO US

This guide contains instructions regarding safety as well as precautions to take to ensure a compliant and successful installation. Please pay special attention to this symbol and follow any instruction given.

Congratulations, you are now a FLEXDECO Floor Warming & Heating System owner. To ensure the best possible installation, please read the following guide before you begin. Ensure that the installation is in accordance with the current construction standards in your region.

This product can be used as a main source of heating (provided the heat loss of the room falls below the energy installation capabilities) or as an added touch of comfort at your feet. The ambient and floor temperatures that can be achieved are dependent on the temperature outside, the insulation of the room including the floor's insulation, window coverage, type of floor covering used, etc. To learn more about the performance of the system for your particular installation, refer to a construction professional, an architect or an engineer.

This system is designed and approved for interior room heating in wet or dry environments, subject to local electrical standards.

For any additional information, please consult your authorized FLEXDECO dealer.



HEATING CABLE, SERIES TYPE G AND W CANADA, TYPE C USA

This cable is an electrical appliance and should be installed according to the local and/or national electrical codes. Its installation should be entrusted to duly qualified personnel where required by law.

Required material and tools

In order to install the system, you will need the following items:

1. FLEXDECO floor warming and heating cable kit including: heating cable(s) and installation guide. According to the type of installation, either FLEXDECO gauges or hot glue sticks, sold separately*, or an uncoupling membrane designed for heating cables.
2. FLEXDECO thermostat and floor probe, sold separately (the floor probe is included in the box with FLEXDECO's thermostat).
3. Hot glue gun (when installing with gauges).
4. Expanded electrical connection box.
5. Protective plate for the wall sill plate (if required).
6. Appropriate multimeter.
7. Megohmmeter (with test voltage set at 1,000 Vdc).
8. Various tools: measuring tape, marker, calculator, screw driver, tool to groove the sub-floor (if needed), fish cord to pull the probe cable in the wall, fish tape, shears, electrical tape, a 2.5 cm (1 in) diameter and 30 cm (1 ft) long stick or pipe for the dispenser box.
9. Vacuum cleaner, broom.
10. Cardboard or other light material (to put the tools on).

*The gauges can be secured to the sub-floor by using the supplied hot glue sticks or by using nails, screws or a T-50 staple gun.

Note: Do not staple the cable itself.

Introduction

General instructions

The FLEXDECO Cable can be installed either in an uncoupling membrane designed for use with a heating cable or with FLEXDECO's white coloured Universal Snap-in GaugesTM designed specifically for this cable.



IMPORTANT: The subfloor must meet construction standards and be strong enough to support ceramic tile or natural stone. Refer to the membrane manufacturer to know which supports are compatible for an installation with a heating cable, and to the Tile Council of North America publications (www.tileusa.com) for installation standards.



IMPORTANT: Vacuum and clean any mortar residue that could prevent the installation of the cable between the membrane's studs.

This product was designed to be installed in an uncoupling membrane with a minimum regular spacing of 7.6 cm (3 in) and a maximum regular spacing of 10.1 cm (4 in) depending on the membrane.

It is also possible to install the cable on other types of supports (concrete, plywood, etc.) with FLEXDECO's white coloured Universal Snap-in GaugesTM (see the section "On other types of surfaces with gauges" on page 5).

Room measurements verification



IMPORTANT: Verify your measurements and recalculate the net heated surface before installing the cable to make sure you have the proper cable length for the project (picture 1). Refer to the FLEXDECO website at WWW.FLEXDECO.CA.



Picture 1



IMPORTANT: Never connect a cable while it is on the spool. To test the cable, follow the "Cable verification" procedure.

Cable Verification

The FLEXDECO seal on the cable warrants the integrity of the cable. The cable cannot be returned if the seal is broken. As a quality assurance measure, each cable has been subjected to a 1,500 V dielectric test and a resistance test.

Before removing the seal and installing the system, the cable insulation and resistance should be verified to ensure the cable conformity. You will have to verify the cable integrity two more times during the installation: once the cable is secured to the floor and before the flooring is installed. These tests are conducted three times to make certain that no damage was caused to the cable during the different stages of the installation.

Resistance verification

Use an appropriate multimeter to measure the resistance between the black leads. If an automatic multimeter is used the reading will be taken instantly. If the multimeter is not automatic, set it to 200 Ω for a cable under 200 Ω or at the higher value for a cable over 200 Ω . The resistance value of the cable is indicated on the label attached to the end of the cold lead. Compare the test result with the resistance indicated on the label.

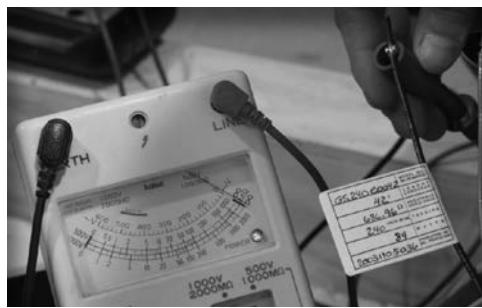
Record the results on the test log. The measurement should be similar to the resistance indicated on the cable label ($\pm 10\%$) see (picture 2). The cable's resistance was established in an environment at 20 °C (68 °F). If you obtain a reading that does not correlate with these parameters contact FLEXDECO customer service at 1 844 934-2999.



Picture 2

Insulation verification

Use a megohmmeter to verify the cable insulation integrity. Connect the instrument's black cable to the system ground wire (the green lead) and the red cable to one of the heating elements (black leads) and then send a 1000 V current (picture 3). This result should be "infinite" ohms. Should there be a current leakage between the heating element and the insulation, the appliance will indicate a result between 0 and 500 M Ω .



Picture 3

Record the results



IMPORTANT: Record the results obtained for these two tests on the test log every time you perform them: before breaking the seal, after the cable is secured to the floor, before the flooring is installed and after the flooring installation. These results must be recorded on the test log in order to preserve the system's limited warranty.

Should the results obtained not comply with cable specifications, do not break the cable seal and contact FLEXDECO customer service at 1 844 934-2999.

Preliminary electrical installation

Circuit

Floor heating systems should be connected to electrical circuits dedicated to heating. The amperage drawn by the cable sets, as indicated on the cable labels, will determine the required circuit intensity. Please take note that the maximum load that can be supported by the FLEXDECO thermostat is 15 A.

If your system requires more than 15 A, you may need more than one circuit. For a load greater than 15 A, a system with an expansion unit or a relay is required. A FLEXDECO thermostat can control an unlimited number of expansion units.

For further information regarding their connection please refer to the literature included with those products, also available on the FLEXDECO website at www.flexdeco.ca.

Electrical connection box

Determine where the thermostat connection box will be installed. It should be in an accessible location in the room where the system will be installed and at an appropriate height.

Use an expanded connection box or a 4 in x 4 in box with knockout holes for conduits for the system connection (plan one connection box for each 15 A circuit).

Conduit

(For all the details, refer to your local electrical code.)

A conduit approved for electrical wiring, inside which the non-heating portion of the cable (cold lead) will be inserted, must be installed between the electrical box and the floor.

- Unless approved for this application, electrical metallic conduits are not allowed in wet environments (ex.: shower).
- PVC conduits are allowed only in walls that do not contain thermal insulation.
- The ends of the conduit must be deburred and bushings must be installed to protect the cable against any mechanical damage.
- Conduits must be adequately secured.

Fish cord

Before installing the gypsum, install a temporary fish cord in the wall, between the floor and the electrical box. When installing the probe on the floor, use this cord to pull the probe wire to the thermostat. The probe wire must be run outside the conduit containing the cold lead, outside the electrical box and be inserted in the opening provided for this purpose on the thermostat's base.



IMPORTANT: Connect the cable to the thermostat only once the cable has been installed and covered.

Note: Keep ends of the cold lead dry before and during installation.

Cold lead

The cold lead is flat and black, is 2,5 m (8 ft) long and is connected to the heating cable with a mechanical joint. Just like the heating cable, the mechanical joint must be installed on the floor and covered with the selected mortar.

Since the joint's diameter is bigger than the heating cable's, it will be inserted, if needed, in a groove in the membrane (validate with the membrane manufacturer's instructions) in order to avoid unevenness when the floor covering is installed (picture 4) or in the subfloor if using Universal Snap-in Gauges (picture 5).



Picture 4



Picture 5

- All the heating portion of the cable (including the mechanical joint) must be secured to the floor and covered with mortar. The heating cable should never be, under any consideration, installed in/on walls.
- The system must not be installed under fixed furniture or where air does not flow freely. It should never be installed in closets, wardrobes, over walls or partitions nor over cabinets or in a ceiling.
- The heating cable should never be installed over an expansion joint.
- The installation of the system should not be performed under 0 °C (32 °F) ambient air temperature.

Installation plan

Above all, plan your installation while taking into account the above mentioned guidelines. It is recommended to make an installation plan in order to foresee direction changes, obstacle skirting, buffer zones, etc. Buffer zones are areas that are not essential to heat (i.e. behind the toilet, behind a door, or any other low traffic area) that can accommodate any excess cable.

Using a suitable marker or tape, draw the obstacles to be bypassed directly onto the membrane or sub-floor (picture 7).



Picture 7

Cable installation



IMPORTANT !

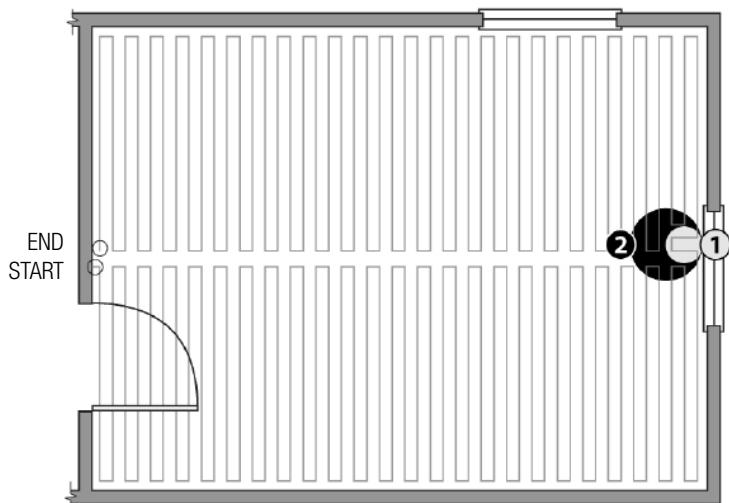
Before starting installation, take note that...

- The cable will be installed at a minimum distance of:
 - 5 cm (2 in) from the base (toe-kick) of a fixed furniture or cabinet, toilet, patio door, bath or shower step;
 - 5 cm (2 in) from any wall;
 - 15 cm (6 in) from drains;
 - 20 cm (8 in) from any other heating system secured to the floor or in contact with the floor (this does not apply to a convection type heating appliance).
- The cable must be spaced at least 13 mm (1/2 in) from any exposed combustible surface.
- The cable cannot be overlapped, crossed, cut, shortened nor modified.
- The spacing between the cable runs must remain unchanged throughout the installation and must never be smaller than 7.6 cm (3 in) or larger than 10.1 cm (4 in) if installed in an uncoupling membrane; the cable must be installed at a regular spacing of 7.6 cm (3 in) if installed with gauges.
- **Cables must be installed in runs of less than 3 m (10 ft) long.** Divide the room in smaller sections if it exceeds 3 m (10 ft).
- The uncoupling membrane must be installed before inserting the cable according to the membrane manufacturer's instructions.
- **IMPORTANT:** to insert the cable into the membrane, use a non-cutting tool such as a wooden trowel.
- Mortar should be used according to the membrane manufacturer's recommendations.

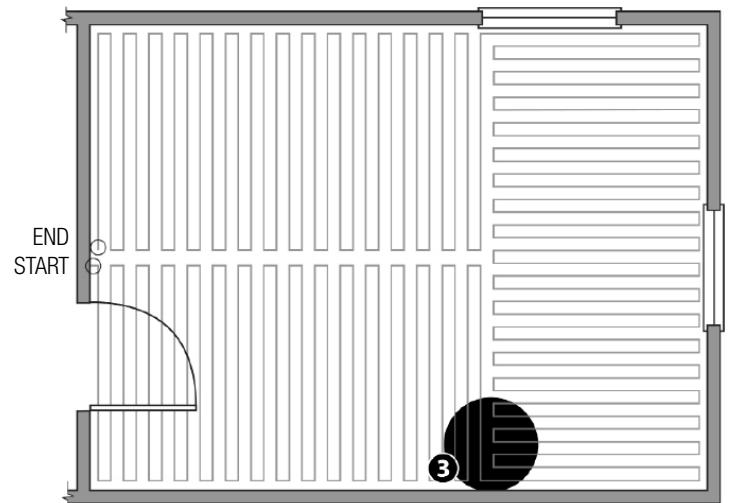
Plan the installation to fit the entire cable in the room: the heating cable shall not extend beyond the room or area in which it originates.

Ensure that the buffer zones are easily accessible to accommodate any excess cable while abiding by all the installation instructions. If multiple cables are required for the installation, each run of the cable should be carefully planned to ensure that the spacing between the cables is always met.

Rooms longer than 10 feet

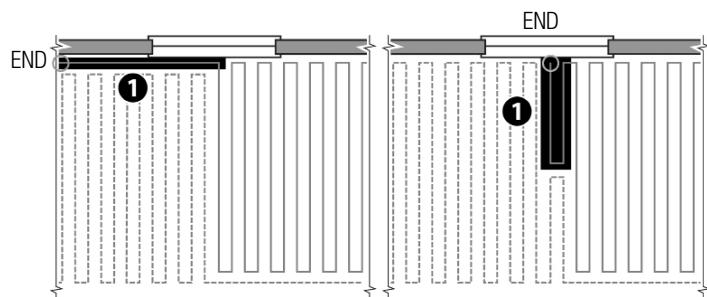


1. Do a small detour to break up the cable run.
2. Ensure the chosen spacing is respected all around.



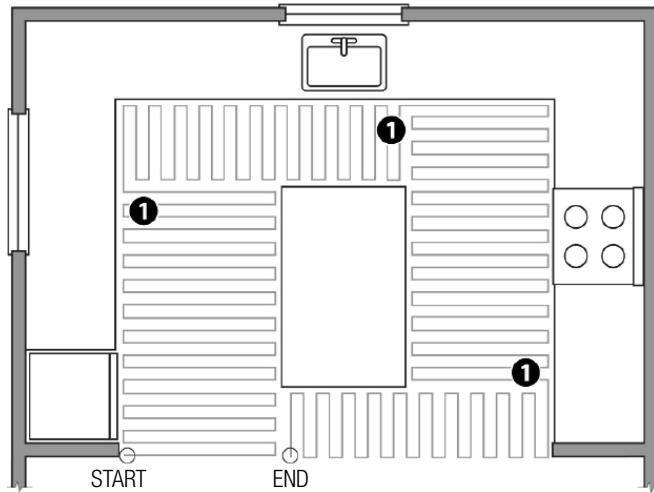
3. Change direction if you need more flexibility to get closer to the wall.

Installation with two cables



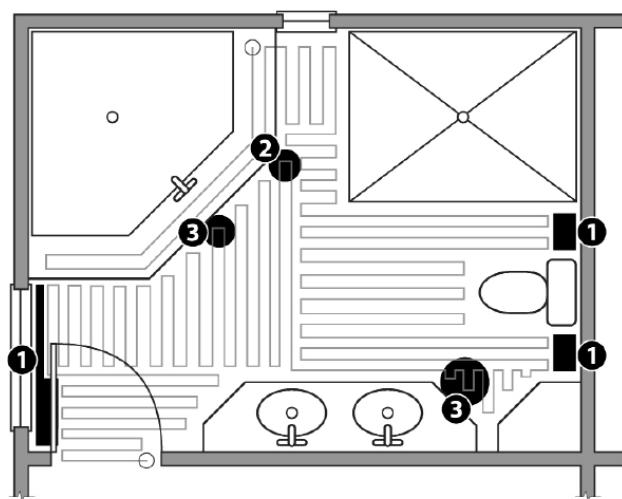
1. End the installation of the first cable by the wall, so that the second cable nestles in easily.

Proper spacing to walls and fixed objects



1. Change directions so the cable can be installed to the closest spacing allowed from walls and fixed furniture.

Bathroom example



1. Buffer zones.
2. Change direction because the cable is too close to the podium.
3. Gauges must always be perpendicular to the cable runs.

Two installation systems

The FLEXDECO Cable can be installed two ways:

1. In an uncoupling membrane designed specifically for heating cable and installed according to the membrane manufacturer.
2. On traditional surfaces such as plywood and concrete using FLEXDECO's white coloured Universal Snap-in Gauges™ specifically designed for the FLEXDECO Cable.

On an uncoupling membrane



IMPORTANT: This product was designed to be installed in an uncoupling membrane with a minimum regular spacing of 7.6 cm (3 in) and a maximum regular spacing of 10.1 cm (4 in) or usually at every three (3) studs on a membrane. Spacing can never be modified throughout the installation.

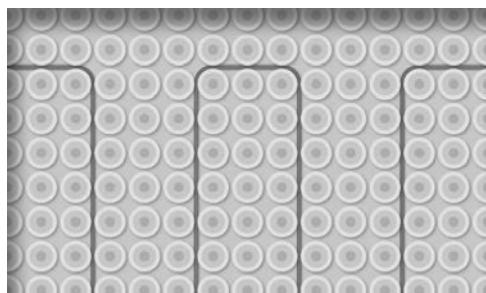
Membrane installation

Follow the membrane manufacturer's installation instructions and recommendations.

Cable installation

To insert the cable between the membrane's studs, apply a light pressure using a non-cutting tool such as a wooden trowel. When changing directions and contouring studs, always make sure the cable respects a minimum radius of 13 m (1/2 in).

Install the cable in the membrane at a regular spacing at every three (3) studs (picture 7). Be careful not to damage the cable when inserting it into the membrane.



Picture 7

Refer to the "Floor probe installation" section for information on installing a probe in an uncoupling membrane.

On other types of surfaces with gauges

General guidelines



IMPORTANT: The subfloor must meet construction standards and be strong enough to support ceramic tile, natural stone or self-leveling underlayment. Refer to Tile Council of North America publications (www.tileusa.com) for installation standards.

Whatever the selected support, the floor surface must be clean, flat, smooth and free of protruding nail or screw heads or other materials that may damage the cables. Always ensure that the selected sub-floor is compatible with mortars or self-leveling underlayment.

Compatible sub-floors

Plywood and cement board

FLEXDECO Floor Warming and Heating Systems are installed directly on a plywood surface and cement board without any specific floor preparation, other than the general instructions mentioned previously.

Structural concrete slab (condo tower)

FLEXDECO strongly recommends insulating the concrete slab on the surface, between the slab and the heating cable, in order to limit heat loss in the concrete slab and around the perimeter of the room where the cable is installed. It is important to always refer to the building code relating to a slab's insulation.

Concrete slab on an existing floor (basement, single family home)

For non-insulated slabs, FLEXDECO strongly recommends insulating the concrete slab on the surface in rooms where a cable is being installed.

For insulated slabs, in cases where only parts of the slab will be heated, it is recommended to insulate the slab on the surface in those areas. It is important to always refer to the building code relating to a slab's insulation.

Ceramic

Refer to the mortar or self-leveling underlayment manufacturer to adequately prepare the sub-floor to ensure proper adhesion.

Acoustic membrane

Install the membrane following the manufacturer recommendations. The heating cable is to be installed over the membrane, which must be properly glued to the sub-floor prior to installing the cable.

Anti-fracture membrane

In the case of membranes not specifically designed for heating cable installation, the heating cable is generally installed over the membrane. However, certain manufacturers recommend that the cable be installed under the membrane. Always check with the manufacturer before proceeding with the installation.

Mortar bed (sand coat)

The FLEXDECO Cable and the floor probe must be installed on top of the mortar bed. To ensure the adhesion of the installation gauges, the mortar bed must be smoothed with a flat trowel in order to obtain a surface that is smooth and uniform, not granular. Should the surface be too granular for the hot glue, glaze the mortar bed with mortar.

Scratch coat

To avoid any risk of damage, always glaze the mesh to obtain a smooth surface prior to installing the cable. Gauges are glued using hot glue on the glazed surface.

Gauge and cable installation

Use a hot glue gun to secure the gauges to the subfloor (gauges can also be nailed, stapled or screwed). For maximum adherence, apply hot glue uniformly under the gauges. Never touch the cable with the glue gun tip. It is suggested that the glue gun be rested on a piece of cardboard during installation.

Install the gauges as the work progresses by joining them together (picture 8).



Picture 8

Slide the cable through the circular shapes by applying a slight pressure (picture 9). Apply moderate tension on the cable allowing it to remain parallel. When inserting the cable in the gauges, or changing the cable direction, ensure that the cable maintains a minimum 13 mm (1/2 in) radius curve.



Picture 9

To get around obstacles such as diagonal walls, fixed furniture, etc., install the gauges in such a way that they follow the shape of the obstacle. Gauges should always remain parallel to each other, perpendicular to the cable.

The cables should be stabilized at regular one-meter intervals (every 3-4 feet). Snap together the required number of gauges and insert them upside down under the cable runs so the cables don't snag in them.

Once inserted, turn them over and slide the cables between the circular forms. Move the gauges slightly to one side making the cable more stable and secure them to the floor.

Once the cable is entirely secured, glue the tip of it to the floor with hot glue. Do not touch the cable with the tip of the glue gun.

A typical installation of the FLEXDECO heating floor system in a bathroom is shown (picture 10).



Picture 10

Wet environment installation

The FLEXDECO Cable can be installed in a wet environment such as a European style shower floor or sauna with a ceramic or natural stone floor.* However, additional precautions must be observed.

- The thermostat must be located at least 1 m (3 ft 3 in) away from the wet zone so that it cannot be reached by a person in that area.
- The shower must have its own cable.
- Drill the hole in the wall 15 cm (6 in) above the floor to avoid the waterproof membrane.
- The installation must be performed in accordance with all other instructions listed previously, such as minimum distance from the drain, restrictions for installing the cable in walls, etc.

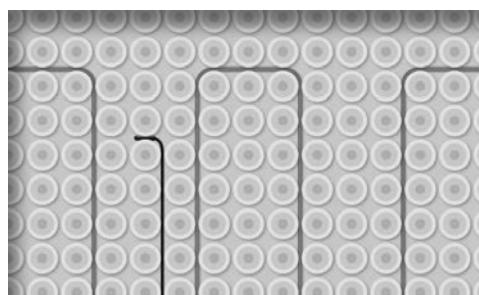
* Applications must be validated with local and/or national electrical codes.

Floor probe installation

Insert the thermostat probe in the membrane or on the subfloor according to the type of installation. The probe should be centered between two heating cables.

For an installation in a membrane, insert the probe wire between studs between two cable runs and curve the end of the probe at 90 degrees between two studs so it is centered between the two heating cables (picture 11).

Place the probe inside the heated zone, at a distance of 30 to 60 cm (1 to 2 ft) from the perimeter. Do not cross the probe wire over the heating cable. The probe should be placed in a neutral location, far from any other heating or cooling sources.



Picture 11

Pull the probe wire using the fish cord previously installed or using fish tape, outside the conduit and electrical box. Verify its integrity with an appropriate multimeter (refer to the thermostat installation guide for more details).

Securing the cold lead and the probe to the connection box

To make it easier to pass the cold lead through to the connection box, wrap the label around it (picture 12). Tape the label with electrical tape to maintain it in place. The cable identification label must remain on the cable. **Removing it will void the cable's limited warranty.**



Picture 12

Pull the cold lead in the conduit using fish tape, if required.

If necessary, cut any excess of the cold lead while keeping the product's identification label.

To do so, remove the black sheath all the way to the desired spot without damaging the conductors, slide the identification label over the conductor and cut the excess wire.

Install a protective plate if required at the bottom lathe of the wall (figure 13).



Picture 13

Cable verification

Once the cable installation is completed, once again verify the cable's integrity as explained in the section "Cable Verification". Record the results on the test log. Should the cable have been damaged during installation, do not install the flooring. Contact FLEXDECO Customer Service at 1 844 934-2999.

System protection

Between the installation of the cable and the laying of the flooring, protect the cable with cardboard or similar soft material and restrict access to the area if the cable is being installed using gauges.

It is recommended to take photographs of the cable installation before installing the flooring. These pictures will prove that your installation meets all the standards and written instructions and will be a useful reminder should you have to renovate.

Floor covering installation

Once the cable has been installed and tested, proceed to the application of the mortar or self-leveling underlayment and the installation of the floor covering. Please refer to the manufacturer's recommendations in regards to the use of their product with floor heating systems.

General guidelines about mortars and self-leveling underlays

Whatever the selected technique, the heating portion of the cable, as well as the mechanical joint and floor probe, must be completely embedded in the mortar or self-leveling underlayment.



WARNING: The floor covering must be in direct contact with the mortar in which is embedded the heating cable. Make sure there is an adequate transfer of mortar according to current standards.



WARNING: Precautions to Take While Installing the Flooring

When mortar is used, never hit the trowel on the heating cable to remove excess mortar from the trowel: cables could be damaged. Use a sponge or a wet cloth to remove excess mortar as you lay the tile: do not use a utility knife or the edge of your trowel. These tools could damage the heating cable.

During all operations, lay tools and materials (buckets, etc.) on a piece of cardboard instead of directly on the cables.

Note regarding the floor stability

Floor stability will vary according to the type of flooring installed and its components. Mortar manufacturers and the Tile Council of North America (TCNA) strongly recommend the use of expansion joints on the perimeter of the room and obstacles as well as across the room (reference TCNA article EJ-171).

Should you require more information regarding tile setting or sub-floor construction, contact the TCNA (www.tileusa.com).

Please note that the following instructions do not represent a complete flooring installation guide. They only offer general guidelines to be observed while installing over a floor heating system. Always follow the flooring manufacturer's directions in regards to the use of their products.

Floor covering installation (with an uncoupling membrane)

See the membrane manufacturer's recommendations for the types of compatible mortars as well as instructions on the floor covering installation.

Floor covering installation (with gauges)

1. Polymer-modified mortar glazing technique (picture 14)
– Ceramic or natural stone flooring



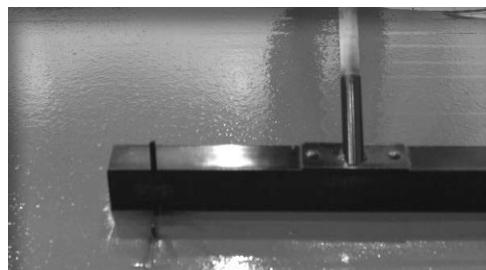
This technique involves glazing the cables with the same type of mortar that will be used for the floor covering. A thin layer of polymer-modified mortar is spread over the cable (in the same direction as the wire) with a flat trowel. Pull the trowel at a 45° angle using a little pressure. Spread the mortar in a way that the space between the cables is completely filled. It is not necessary to fully cover the gauges.

Once the glaze is set, proceed with laying the tile as per the manufacturer's recommendations.

2. Polymer-modified self-leveling underlayment glazing technique (picture 15) – All types of flooring



NOTE: The FLEXDECO Cable can only be covered with a self-leveling underlayment if it is installed with Universal Snap-in Gauges™.



Picture 15

Make sure that gauges are secured to the floor surface and that cables are stabilized at 1 m (3ft) intervals to prevent them from floating when the self-leveler is applied.

Using a smooth scraper, spread a thin layer of self-leveling underlayment. Once the underlayment is set, proceed with laying the floor covering as per the manufacturer's recommendations.

Cable verification

Once floor covering installation is complete, verify the cable's integrity one more time, as described in the "Cable Verification" section at the beginning of this guide. Record the results on the test log.

Connection to the thermostat



DANGER: SEVERE RISK OF ELECTROCUTION. Turn off the power of the designated electrical circuit prior to connecting the system controls.

Thermostat to use

Use FLEXDECO thermostats to operate the system. These thermostats are equipped with a class A ground fault circuit interrupter (GFCI) that will protect the system in case of fault. To preserve the system's warranty the use of a thermostat equipped with a class A GFCI (5 mA) is required.

Single-circuit installations

Connect the system's green wire (ground) to the terminal in the connection box. Proceed as per the instructions in the electronic thermostat installation manual. Identify the circuit on the electrical panel. Complete and apply the warning label.

Multiple-circuit installations

Should your installation require more than one circuit, you will need one thermostat, as well the required number of expansion units or relays. For their connection, refer to the instruction guide provided with the thermostat, the expansion units or the relays. Identify the circuits on the electrical panel. Complete and apply the warning label.

Keep installation and user guides

Please keep the thermostat instructions in a safe place for future reference..

System start-up

Curing period

Do not turn your system on immediately. The system can be operated only after the mortar or self-leveling underlayment has completely cured. This waiting period is essential to ensure that the mortar or self-leveling underlayment is properly set. Refer to your manufacturer's instructions to verify the curing time for the product you are using (generally 28 days).

Use of rugs

Do not lay a rug on a floor equipped with a heating system. The heat that would get trapped could alter your rug or flooring. The use of a bath mat is acceptable, as long as it is taken off the floor once the bath period is over.

For the same reason, do not lay a piece of furniture under which air cannot freely circulate on flooring under which there is a floor heating system.

Repair

Should the floor covering need repair, proceed with caution. Always turn off the power supply to the heating cable before removing the piece of flooring that needs to be repaired. For ceramic or natural stone floors, gently scrape off the grout around the tile to be replaced to a maximum depth of 3 mm (1/8 in) and break the tile with a hammer starting from the center (do not use excessive force which could damage the cable). Without damaging the cable, carefully scrape off the mortar with a chisel or a scraper.

Should the cable be damaged in the process and/or the GFCI be set off, the system is out of service and should not be activated. THE CABLE CAN BE REPAIRED. A repair kit is available from your FLEXDECO dealer.

Never attempt to repair a cable located in a wet area, contact FLEXDECO Customer Service at 1 844 934-2999.

FLEXDECO's Floor Warming and Heating System is maintenance free. Should it stop heating, immediately contact FLEXDECO Customer Service at 1 844 934-2999.

Limited warranty



The **FLEXDECO Cable** bears a 25 year limited warranty or a lifetime warranty if installed by a FLEXpert certified floor heating installer. Please refer to the FLEXDECO Warranty text inserted in this document for complete details.

Return the test log filled with the complete test results in order to preserve the Limited Warranty of your system.



Floor Warming and Heating System

LIMITED WARRANTY FLEXDECO Heating Cable

FLEXDECO (hereinafter "FLEXDECO") warrants to the original purchaser that the low temperature electric radiant floor heating system cable (hereinafter the "Product") as designed and manufactured by FLEXDECO, and once installed in conformity with the instructions of FLEXDECO, shall be free of defects, in either materials or workmanship as described in this document.

COVERAGE PERIOD:

This Limited Warranty becomes effective on the date of purchase of the Product by the first owner and shall remain effective for a period of twenty-five (25) year [three hundred (300) consecutive months] from the date of original purchase of the cables. This Limited Warranty is valid for Products bought and installed in Canada or the USA only.

LIMITED LIFETIME WARRANTY:

For the Limited Lifetime Warranty to apply, the product must be installed by a FLEXpert or FLEXboutik through an installer certified by FLEXDECO, and a completed test log must be submitted and must include the results of the insulation and resistance verification tests carried out before and after the cable is installed, and after the floor covering is installed.

CONDITIONS:

This Limited Warranty is only applicable to new and unused Products purchased from FLEXDECO, or its authorised re-sellers, provided the Installation Requirements contained in the Product Installation Guide are met. Claims made for coverage under this Limited Warranty must be addressed in writing, within seventy-two (72) hours from an event giving rise to a claim, or the appearance of a defect, to FLEXDECO, 1 844 934-2999.

Persons making claims for coverage must present FLEXDECO with proof of purchase as well as proof of installation in accordance with the Installation Requirements (pictures recommended) and any documents FLEXDECO may require.

Any parts replaced under the terms of this Limited Warranty become the property of FLEXDECO.

WHAT FLEXDECO WILL/WILL NOT DO:

FLEXDECO's obligations under this Limited Warranty are limited to, at its sole discretion, repairing or reimbursing the cables originally supplied in the Product that FLEXDECO has determined to be defective in materials or workmanship.

FLEXDECO shall repair or reimburse, at its sole and entire discretion, the defective cable goods free of charge. Repair or replacement will only be made for defective parts; and no allowance or reimbursement shall be made for wages, labor and freight costs. Should FLEXDECO choose to reimburse the cost of the cable, it will do so at the lesser of the value of the purchase price or the suggested retail price for the same item. With respect to the parts not manufactured by ourselves, we shall only warrant these to the same extent as our suppliers undertake a warranty obligation towards ourselves.

Because of our ongoing commitment to product quality and innovation, FLEXDECO reserves the right, at any time and without incurring any obligations, to revise, change, modify or discontinue any specifications, features, designs or components.



Floor Warming and Heating System

Place
Stamp
Here

FLEXDECO

2400, RUE DE LA PROVINCE
LONGUEUIL (QUÉBEC) J4G 1G1
CANADA

LIMITED WARRANTY (continued)

INSTALLATION REQUIREMENTS:

In addition to the requirements included in the current FLEXDECO Installation Guide, which is incorporated herein by this reference, the Product must be installed in accordance with accepted standards, with FLEXDECO thermostats (or a suitable equivalent, as determined by FLEXDECO) and with adhesives that are compatible with an electrical in floor heating system.



WARNING: Failure to install the Product with controls and protection systems (including ground fault circuit interrupters) in conformity with your local electrical Codes, as well as the Installation Guide, may cause fires.

WARNING: Failure to install the Product with the appropriate cable/wire installation gauges may damage the cables' wiring and lead to Product failures, which are not covered under the Limited Warranty.

WARNING: Failure to install the Product with a good quality polymer-modified mortar or polymer-modified self-levelling underlayment may lead to failures and defects, which are not covered under this Limited Warranty.

EXCLUSIONS - ARE NOT WARRANTED:

- Failures resulting from improper installation;
- Damage caused by abuse, improper installation, repairs, service, maintenance and/or storage, modifications or use of parts not manufactured or supplied by FLEXDECO;
- Damage caused by abuse or neglect regarding the Product;
- Use of thermostats other than FLEXDECO thermostats, or suitable equivalents;
- Damage caused by water, submersion, accident, fire or any act of God;
- Incidental, consequential or other damages (including labor costs, inconvenience, loss of time or loss of income).

LIMITATIONS OF LIABILITY:

THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT ANY LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS OR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESSED LIMITED WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS LIMITED WARRANTY. SOME STATES AND PROVINCES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE; AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS WHICH MAY VARY FROM ONE STATE OR PROVINCE TO ANOTHER.

Neither FLEXDECO re-sellers, installers or any other person is entitled or authorized to make any affirmation, representation or warranty other than those contained in this Limited Warranty.

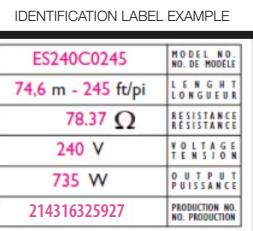
COMPLETE AND RETURN TEST LOG IN ORDER TO PRESERVE SYSTEM WARRANTY

PRODUCT INFORMATION (see identification label)

Model no. : _____
Length : _____
Resistance (Ω) : _____
Voltage (V) : _____
Output (W) : _____
Production no. : _____

TESTS	MANUFACTURING VALUES	BEFORE BREAKING SEAL	AFTER INSTALLATION	AFTER CABLE COVERING	AFTER FLOORING
Date (YYYY/MM/DD)	-----				
Heating cable resistance (Ω)					
Insulation resistance (MΩ)	Infinite				
#1 floor sensor resistance (KΩ)	10 @ 25°C/77°F				
#2 floor sensor resistance (KΩ)	10 @ 25°C/77°F				
Tested by	-----				

START DATE (YYYY/MM/DD) : _____



ES240C0245	MODEL NO. NO. DE MODÈLE
74.6 m - 245 ft/pi	LENGTH LONGUEUR
78.37 Ω	RESISTANCE RÉSISTANCE
240 V	VOLTAGE TENSION
735 W	OUTPUT PUISSEANCE
214316325927	PRODUCTION NO. NO. PRODUCTION

CONSUMER
First Name : _____
Last Name : _____
Address : _____
City, Prov./State : _____
Email Address : _____
Phone Number : _____

RETAILER
Company Name : _____
Address : _____
City, Prov./State. : _____

DATE OF PURCHASE (YYYY/MM/DD) : _____

ROOM : _____

New contruction Remodel

CABLE INSTALLER
First Name : _____
Last Name : _____
Company Name : _____
Address : _____
City, Prov./State. : _____

THERMOSTAT INSTALLER
First Name : _____
Last Name : _____
Company Name : _____
Address : _____
City, Prov./State. : _____