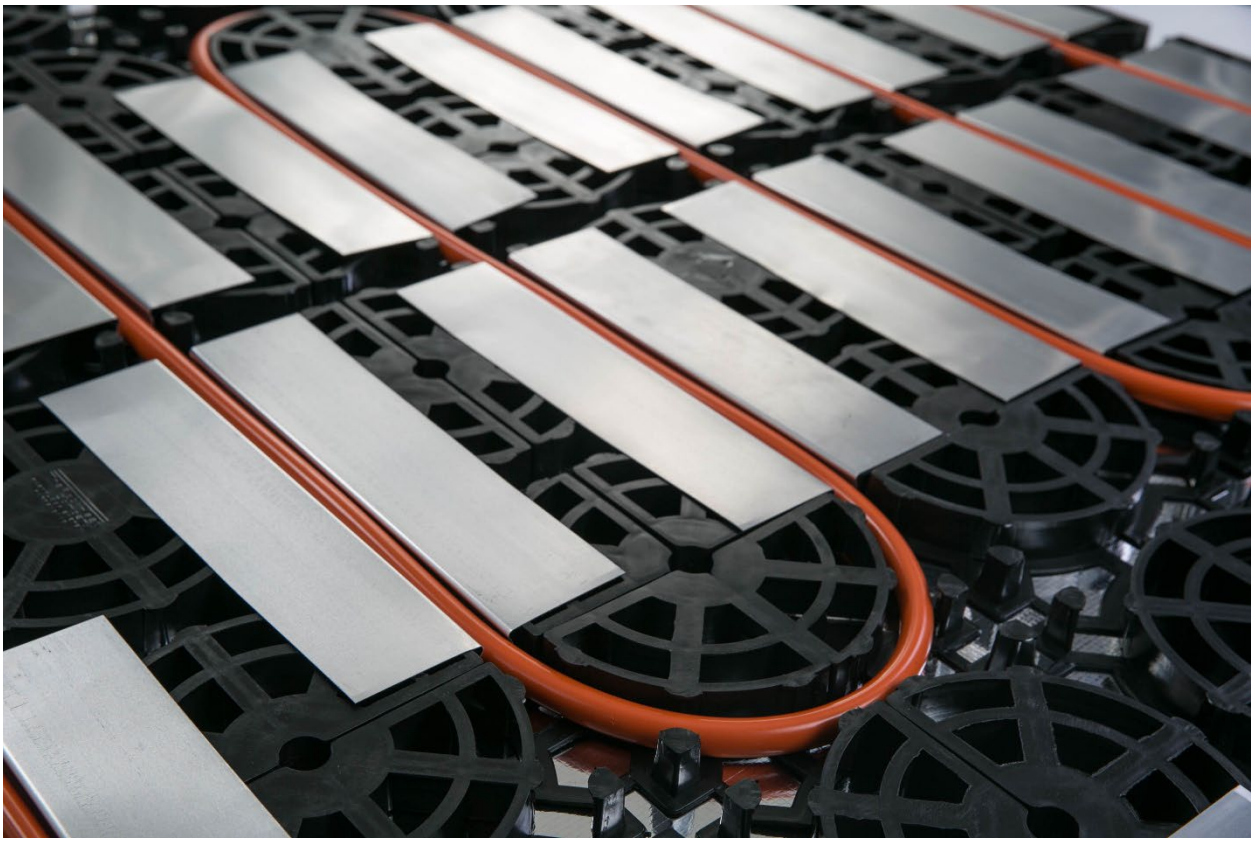
FloorHeat° EasyFloor System Installation Manual



Installation Guide

Thank You for Your Purchase!

To ensure a successful installation, please carefully follow these instructions.

Important Notes:

- Read the entire manual before beginning installation, paying special attention to the **Important Notes, System Startup Checklist, and Troubleshooting Guide** for a quick understanding of key steps.
- Inspect all components for shipping damage before installation. If damaged, call **888-265-5455** for support. **Do NOT return the system to the store.**
- Installation must be performed by a **qualified professional** in accordance with national and local codes.
- Ensure all tubing and connections are properly secured to prevent leaks and optimize heat distribution.
- Failure to follow these instructions may result in **property damage, system malfunction, or personal injury.**

Tools Required

- **Plastic Grid:** Nippers, chop saw, or table saw
- **Heat Transfer Plates:** Tin snips
- **PEX Tubing:** PEX-AL-PEX cutting tool and reamer
- **Cement Board:** Masonry saw or circular saw with diamond blade
- **Reflective Foil:** Scissors or utility knife

💡 Always wear gloves and eye protection when using any type of power tool.

Safety Precautions

- Sharp edges may result from cutting—wear gloves and eye protection.
- Do not install fasteners (screws/nails) within **3 inches of tubing lines**.

- Tape off tube ends during installation to prevent debris entry.

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1. Planning the Installation

- Review your **floor plan** and system layout to determine tubing placement.
- Ensure subfloor is **clean, dry, and level** before installation.
- Plan for **manifold placement** in a location that allows easy access for future servicing.
- Avoid placing tubing near areas that may have **fixtures, cabinets, or walls** that could block heat.
- Determine the **correct loop lengths** based on the heating requirements of each zone.

💡 **Tip:** In new construction, use a **double bottom plate** or **2x8** for interior wall bases to allow tack strip placement for carpeted rooms. In remodels, lay a **flat 2x4** along walls for the same purpose.

💡 **Phased Installation:** You may install EasyFloor one zone at a time, which allows sub-contractors to continue working in completed areas while other zones are still in progress.

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2. Preparing the Subfloor

- Sweep and clean the subfloor of **dust, debris, and moisture**.
- If installing over concrete, ensure the surface is **fully cured** and apply a vapor barrier if necessary.
- Mark tubing layout using chalk lines to ensure accurate placement.

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3. Installing the EasyFloor System

1. Lay out the **thermal reflecting foil** over the entire heating area, ensuring full coverage.
2. Lay out the **EasyFloor universal tubing track grid panels**, ensuring they are properly aligned. The grids do not stagger.

3. Snap the panels together, covering the entire heating area. The grid is designed for **8-inch on-center tubing placement** and allows for multiple turning points.
4. Insert the **heat plates** into the grooves on each side of the grid squares.
5. Secure panels as needed to prevent movement during tubing installation.
6. Confirm alignment with the planned tubing layout before proceeding.

💡 **Tip:** The **modular interlocking grid design** allows for easy adjustments and flexible tubing runs without requiring messy concrete pours or rigid grooved panels.

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4. Laying Out the PEX-AL-PEX Tubing

1. Start at the **manifold location** and unroll **PEX-AL-PEX tubing** carefully to avoid kinks.
2. Snap the tubing into the **heat plates and grid system grooves**. The grid provides multiple turning spots for optimal loop designs.
3. Follow the pre-planned tubing layout while maintaining an **8-inch on-center** spacing for maximum efficiency.
4. Ensure smooth bends in corners to prevent **kinks or sharp turns**.
5. Leave excess tubing at the manifold connection point for adjustments.

✅ **Check:** Ensure there are no sharp bends or twists in the tubing, which could restrict flow and reduce heating efficiency.

💡 **Why PEX-AL-PEX?**

- **Better heat conduction** due to the aluminum core, which distributes heat more efficiently than standard PEX.
- **Reduced expansion and contraction**, minimizing noise and movement under the floor.
- **Increased durability** as the aluminum layer helps maintain the shape and reduces thermal expansion.
- **Higher efficiency** by reducing thermal expansion and contraction.
- **Easier installation** with pre-formed shape retention, reducing the need for excessive clips or supports.

💡 **Can I use standard PEX?**

- Yes, regular PEX can still be used, but it expands and contracts more with temperature changes, which could cause slight movement and potential noise under the floor during operation.

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5. Securing the Tubing

- Double-check that tubing is fully seated in the **heat plates and grid channels**.
- Use additional tubing clips if necessary to keep tubing from shifting.
- Ensure tubing is evenly distributed to prevent **cold spots** in the heated area.

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6. Connecting to the Manifold

1. Cut **PEX-AL-PEX tubing evenly and squarely** using a PEX tubing cutter.
2. Attach tubing to the supply and return **manifold connections**.
3. Secure with **compression fittings** or clamps per the manifold manufacturer's instructions.
4. Label each loop to match your floor plan for easy troubleshooting in the future.

💡 **Tip:** The aluminum core in **PEX-AL-PEX prevents oxygen diffusion**, reducing the risk of system corrosion.

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7. Pressure Testing the System

1. Close all manifold valves.
2. Connect a **pressure test kit** to the system.
3. Pressurize with air to **50-60 psi** and monitor for **at least 24 hours**.
4. Check for leaks—bubbles in soapy water at fittings can indicate issues.
5. If pressure holds steady, release the air and proceed with installation.

✅ **Check:** Any drop in pressure indicates a leak—**identify and repair before continuing.**

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8. Installing Cement Board

- The **EasyFloor System does NOT require a poured floor covering**.
- Instead, install **cement board directly over the system** before placing the final flooring.
- Secure the cement board using **approved fasteners**, ensuring they do not penetrate the PEX tubing.
- Follow manufacturer recommendations for **spacing and fastening**.

💡 **Note:** Cement board provides a **stable, durable base** for tile, stone, and other flooring types.

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9. Flooring Installation Guidelines

Tile & Stone Flooring:

- Ensure the heating system is **fully pressure-tested** before installation.
- Install **cement board over the EasyFloor System** before applying thin-set mortar.
- Use a **modified thin-set mortar**.
- Use a **crack suppression membrane** over the cement board.
- Tape joints with **fiberglass mesh** and apply thinset per membrane manufacturer's instructions.
- Install tiles following standard tiling procedures.

Engineered Wood & Laminate Flooring:

- Follow manufacturer guidelines for **radiant heat compatibility**.
- Use a **floating floor** installation to allow for expansion and contraction.
- Maintain water temperature below **85°F** to prevent warping.

Luxury Vinyl Plank (LVP) & Vinyl Flooring:

- Ensure LVP is **rated for radiant heating**.

- Install a **thin underlayment layer** over the cement board to protect tubing from direct contact.
- Keep floor temperature below **85°F** to avoid softening of vinyl material.

Carpet Flooring:

- Use a **low R-value carpet pad** to maximize heat transfer.
- Thinner carpets will provide better heat output.

Plywood vs. Hardie Backer:

- Use **½" Hardie backer board** where tile will be the final surface. It offers **superior heat conduction**.
- For hardwood or carpeted areas, **½" plywood** is suitable.
- Secure both with **2½" deck screws** (or Tap Cons for concrete).
- If nailing hardwood into plywood, use **short nails** and increase nail count per board to prevent tubing damage.

10. Connecting the EasyFloor System to the Radiant Heat Control Panel

- Connect **manifold supply and return lines** from the EasyFloor system to the radiant heat control panel.
- Follow the **Control Panel Installation Guide** for proper boiler and thermostat connections.
- Ensure all piping connections are secure and in accordance with local plumbing codes.
- Fill the system with **water or glycol mix** as required.
- Purge air from the system by opening **each loop individually** while running the circulator pump.
- Check that all zone valves are properly connected and operational.
- Set up and configure the system controls for **optimal efficiency** and ensure the thermostat is properly communicating with the control panel.
- 💡 **Tip:** The control panel manages the water temperature and flow through the EasyFloor System, ensuring even heat distribution across all zones. Double-check system parameters to match the flooring and heating requirements.

11. System Startup Checklist

✅ Verify all **tubing connections** are secure. ✅ Ensure system pressure is **12-21 psi** after filling. ✅ Purge air from **each loop** to prevent trapped air pockets. ✅ Set **thermostat** to the desired temperature and test operation. ✅ Monitor for **leaks, pressure fluctuations, or unusual noises**. ✅ Allow the system to **gradually reach operating temperature** before full use.

12. Troubleshooting Guide

Issue	Possible Cause	Solution
No heat in one or more zones	Air trapped in system	Re-purge affected zones
System making noise	Air in lines	Ensure all air is purged
Floor heating uneven	Tubing spacing inconsistent	Verify spacing and adjust if necessary
Pressure too high	Overfilled system	Drain excess water to **12-21 psi**
Low heat output	Water temperature too low	Adjust mixing valve or boiler settings
Leaks at fittings	Loose connections	Tighten fittings and test pressure

Need Help?

📞 Call **888-265-5455 or email floorheatinfo@floorheat.com for technical support.**
🌐 Visit www.floorheat.com for additional resources.

✅ **Congratulations!** Your **EasyFloor System** is now fully installed and ready for years of efficient, comfortable heating!